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| <p>Studies were made in Kansas high schools to determine the effect of school size upon the behavior and experiences of students. The following areas were considered: the schools involved in the study, the data gathered from records and research, out-of-school activities, and the place of high school students in the total life of four small towns.</p> <p>The assumption that a rich curriculum, varied extra-curricula activities, and good facilities necessarily mean rich experiences for the students is refuted. This refutation arises from the confusion between facilities and experiences. Most of the studies showed that the greatest participation in student government and extra-curricula activities, the largest percentage of students assuming leadership positions and responsibility, the most use made of a variety of courses offered, and the greatest involvement in community life came from those small school - small town adolescents.</p> <p>Schools are specialized environments established in order to produce certain educational opportunities and effects. However, without student participation, enthusiasm, and responsibility the educational process is not fulfilled, regardless of excellent facilities. Therefore it appears that increasing school size, in and of itself, is a relatively ineffective means of achieving richness and variety in education.</p> |                          |                                             |                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                          |
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Final Report

BIG SCHOOL—SMALL SCHOOL

STUDIES OF THE EFFECTS OF HIGH SCHOOL SIZE UPON  
THE BEHAVIOR AND EXPERIENCES OF STUDENTS

Cooperative Research Project No. 594

Roger G. Barker

with

Paul V. Gump  
W. J. Campbell  
Louise Shedd Barker  
Edwin Willems  
Wallace V. Friesen  
William LeCompte  
Eleanor Hall Mikesell

Midwest Psychological Field Station

University of Kansas

1962

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## Preface

Capital City High School had 2287 students on September 15, 1960; on the same day there were 37 students enrolled in Otan High School, 30 miles away. Both schools were accredited, public high schools located in Eastern Kansas. There were several hundred other high schools in the area distributed in size between Capital City and Otan. In most other respects, however, the high schools of the region were remarkably similar: in curricula, in activities, in budget per child, in teacher preparation, for example, the top schools differed from the bottom schools by much less than they did in population. In fact, state requirements insured near equivalence in attributes that were considered educationally important.

Nevertheless there were strong views about school size among both schoolmen and laymen. Strong pressures were brought to bear upon small community high schools to combine into larger, multi-community systems, and these were met by counter pressures aimed at protecting and maintaining small schools. Both the pressures and the counter pressures were defended by assertions, sometimes the same assertions, regarding the advantages to children of small and of large schools. But the bases of the assertions were always anecdotes, personal experiences, and speculation; no dependable evidence was available. No one knew, in fact, how life differed for the children who passed through the doors of the small and the large high schools of the area. The aim of the research reported here was to begin to remove this unfortunate ignorance.

The psychological significance of institutional size is not an issue for schools, alone; it is an old and continuing problem in business and government, and it is of fundamental theoretical importance, as well: it is one aspect of the problem of describing and investigating the environment of molar action, a problem which has been awaiting the development of appropriate concepts and methods. These studies have significance, therefore, within a general behavior science context. And, we hope, they may suggest new approaches to educational problems.



The first two chapters of the report are devoted to setting out the general framework of methods and theories within which the specific investigations were carried out and the findings interpreted. Chapter 3 presents a review of the relevant research literature. The reader who is not concerned with these matters, or who wishes to return to them later, may begin the report with Chapter 4; all operations connected with the field work and the analyses, and all results are reported in Chapters 4 to 12.

In Chapter 4, the schools involved in the studies are described, and certain relationships between their size and some of their other characteristics as institutions are explored. Chapter 5 reports the results of the first reconnaissance of the problem of school size and student behavior by making use of data from official reports and records. Chapters 6, 7, and 8 present the focal data which were gathered with particular reference to the behavior of individual children in schools of different size and in strict accordance with the predetermined methodological and theoretical guides.

Chapter 9 describes a replication in other schools of some of the procedures and results reported in Chapters 6, 7, and 8 and it adds some new data and analyses. Chapter 10 reports upon out-of-school activities that have educational values in small and large communities, and Chapter 11 describes the place of high school students in the total life of four small towns. Chapter 12 summarizes the results and discusses their implications for educational practices.

## Acknowledgements

This is not a single study, but a series of interrelated studies; the persons who undertook particular investigations, and who are the authors of the separate chapters, also worked on material presented elsewhere in the report. The whole research has been the work of the Midwest Psychological Field Station.

The office staff of the Midwest Field Station Marjorie Reed, Isla Herbert, and Dorothy Streater carried out crucial tasks in all phases of the work. In addition to these Maxine Mize, LaVelle Anderson, Ruth Finley, Barbara Patrick, and Verna Mae Hundley assisted during times of pressing work.

A study which involves schools means inevitably some disruption of the schools' routines and is time consuming for the school staff. The research workers met unfailing courtesy and genuine interest in the administrators, the teachers, and the students involved. They were all fellow researchers. As we list for each section the persons with whom we worked most closely we wish to include in our thanks the many others in their schools and organizations who cooperated with us.

### Chapter 4

The following school officials were most helpful to us in connection with the behavior setting surveys: Phyllis A. Aley, Herbert A. Barkley, Ira N. H. Brammell, Lee R. Cashman, Basil Covey, Mrs. William Greer, Stanley Inwood, Frederic J. Ketchum, Walter C. Meyer, Charles Short, Henry Streater, L. L. Van Petten, Virgil Volland, E. B. Weaver, G. Murlin Welch, Lyle Welch, and Neal Wherry.

### Chapter 5

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#### Chapters 6, 7, and 8

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#### Chapter 9

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#### Chapters 10 and 11

The basic data of these chapters was collected and recorded by a staff of Junior Research Assistants and Junior clerical aids in the summer of 1959. The high school Juniors who were Research Assistants were Lucy Barker, Roger Brammell, Ralph Frakes, Sonja Hampton, Nancy Hamon, Joye Hensleigh, LaVerna Kessinger, Marilyn Peck, and Larry Sheldon. The clerical aids were Carol Henninger, Jacquelyn Herbert, and Constance Matney.

Robert L. Taylor collected the data for the employment study in University City.



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## CHAPTER 1

### The Ecological Environment: A Psychological Dilemma

Roger G. Barker

The idea is expressed in many forms that the child, the school, and the community are parts of a complex, interdependent system, and hence, that problems of education do not begin and end at the school door. And the view is widespread that, insofar as the school is concerned, it is the whole school that enters into the educational process, not only the individual pupil and his teachers. However, these undoubted truths have been without adequate conceptualization or empirical support, and so have had little effect upon the theory and practice of education. The intention of the studies reported here is to investigate these problems within a broad ecological context. We have approached them by way of two dimensions of schools and communities, namely, the number of persons making up the school or community (population), and the number of parts of the school or community (differentiation).

#### The Inside-Outside Problem

One of the obvious characteristics of human behavior is its variation. Every day of a person's life is marked by wide fluctuations in almost every discriminable attribute of his behavior: in the intelligence he exhibits, in the speed with which he moves, in the emotion he expresses, in the loudness with which he speaks, in the goals he pursues, in his friendliness, his humor, his energy, his anxiety. Even geniuses think ordinary thoughts much of the time; they, too, have to count their change and choose their neckties. Continuous records of the behavior of children show

that the ever-changing aspect of the child's stream of behavior is one of its most striking features: trouble and well-being, quietude and activity, success and failure, dominance and submission, correct answers and wrong answers, interest and boredom occur in bewildering complexity (Barker and Wright, 1955). Laymen know of this dimension of human variation from their own experiences and observations; novelists, dramatists, and biographers have described it. But it is not prominent in scientific psychology.

Scientific psychology has been more concerned with another dimension of behavior variability, namely, with differences between individuals. It is one of the great achievements of psychology that in spite of the variation of every individual's behavior, methods have been devised for identifying and measuring individual behavior constants. An important part of scientific psychology is concerned with the great number of behavior constants that have been measured and with the relations between them.

It is unfortunate that these accomplishments have not been accompanied by equal progress in studying naturally occurring, individual behavior variation. But there is an incompatibility here: to achieve stable behavior measurements, stable conditions must be imposed upon the person, and the same conditions must be reimposed each time the measurement is repeated. This method provides measures of individual constancies (under the designated conditions) but it eliminates individual variations (under different conditions), and it destroys the naturally occurring contexts of behavior.

The problem is not peculiar to psychology. The strength of a beam can be measured only under specified conditions, and under the same conditions each time the measurement is made. But a beam has many strengths depending especially upon its structural context. The same is true, too,

of the meaning of words. Words have a range of meanings, the precise one being determined by the context in which it occurs. A good dictionary gives a number of these meanings, the modal meanings; but for greatest precision it uses the word in revealing contexts. A person is like a beam or a word: he has many strengths, many intelligences, many social maturities, many speeds, many degrees of liberality and conservativeness, and many moralities.

The general sources of intraindividual behavior variation are clear. A person's behavior is connected in complicated ways with both his inside parts (with his neurons, his muscles, his hormones, for example) and with his outside context (with the school class where he is a pupil, the game in which he is a player, the street on which he is a pedestrian). The psychological person who writes essays, scores points, and crosses streets stands as an identifiable entity between unstable interior parts and exterior contexts with both of which he is linked, yet from both of which he is profoundly separated. The separation comes from the fact that the inside parts and the outside contexts of a person involve phenomena that function according to laws that are different from those that govern his behavior. Brain lesions, muscle contraction, and hormone concentration are not psychological phenomena. In the present state of our understanding, they involve laws that are utterly incommensurate with those of psychology. The same is true of the environment with which a person is coupled. The school class where he is a pupil, the game in which he plays, and the street where he walks all function according to laws that are alien to those that govern his own behavior. This is the inside-outside problem which Allport has discussed (Allport, 1955).

The outside context which constitutes the ecological environment is the focus of this research. The ecological environment consists of

(1) those naturally occurring phenomena outside a person's skin, (2) with which his molar actions are coupled, but (3) which function according to laws that are incommensurate with the laws that govern his molar behavior (Barker, 1960). The ecological environment differs from the psychological environment (or life space) and from the stimulus, as the following discussion will make clear.

The fact that behavior varies under the influence of the alien, incommensurate outside contexts of the psychological person places psychology in a serious dilemma. How is a unified science to encompass such diverse phenomena? Neither physics, nor astronomy, nor botany have to cope with psychological inputs to the systems with which they deal. How can psychology hope to cope with nonpsychological inputs? This is our problem, and it is the reason why "the whole school" (an outside, nonpsychological phenomenon) is, as yet, little more than a slogan.

#### The Tautological Problem

In order to study environment-behavior relations on any level, the environment and the behavior must be described and measured independently; otherwise one becomes entangled in a tautological circle from which there is no escape. Thus, for example, three children who were each observed an entire day were found to interact with 571, 671, and 749 different objects; the total number of interactions with these objects were 1882, 2282, and 2490, and each of these interactions had a number of attributes (Schoggen, 1951; Barker and Wright, 1955). But these objects did not constitute the ecological environments of the children, for the behavior of the children provided the sole criteria for identifying and describing the objects. When one uses a person's behavior as the only evidence of



what constitutes his environment, one deals with psychological variables, i.e., with life-space phenomena. The naturally occurring life space deserves investigation, but it is not the ecological environment, and the latter cannot be discovered by using the person's behavior as sole reference point. This is true, not because it is impossible to see all the behavior which occurs, but because the ecological environment comprises a different class of phenomenon, and can only be identified and understood independently of the behavior with which it is linked.

This confronts us with the essence of the ecological environment in its relation to people. One can easily conceive of the problems of students of light perception if they had no physical description of light, or only a physical description of light at the precise point of contact with the receptor. To understand this point of intersection, it is essential to know the structure of light, for the point of intersection takes part of its characteristics from the total wave, quanta, or matrix of which it is a part, and this cannot be known from the points of contact, i.e., the stimulus, alone.

This is a general problem in science. When we are concerned with the outside context of any entity, whether a behaving person, a supporting beam, or a word in a sentence, this context cannot be described in terms of the points of contact with the entity alone. The properties of the points depend upon the structure of which they are parts. Take the word "brought" in the succeeding more inclusive contexts in which it occurs.

brought

were brought under

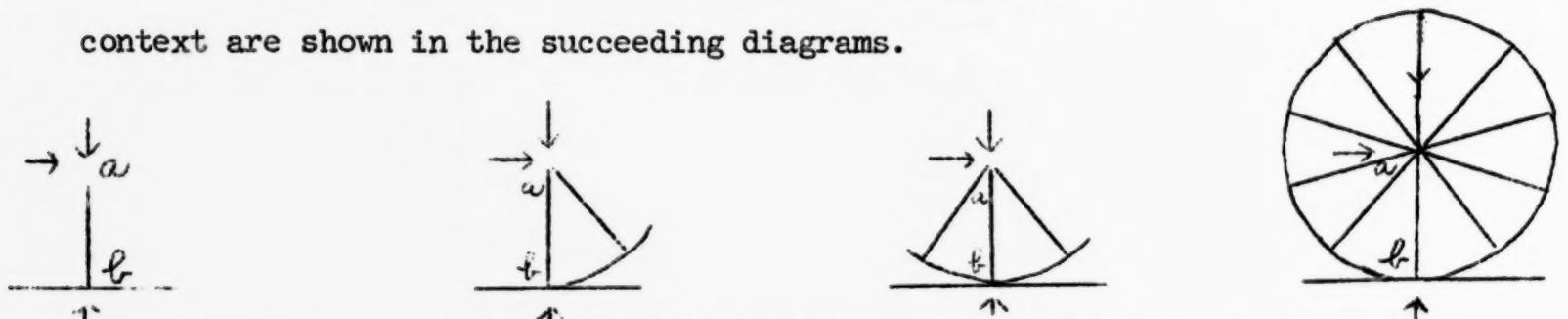
provisions were brought under cover

fresh provisions were brought under cover of darkness

(from R. L. Stevenson The Pavilion on the Links)

The immediate points of contact between the word "brought" and its context are clearly insufficient to define this context; the properties of the contact points "were" and "under" depend upon the total sentence; in fact, "were" and "under" are not the context of the word "brought"; the whole sentence is the context. The contexts of all words in Stevenson's writings, and in all meaningful writings, occur in organized units that are larger than the preceding and succeeding connecting words.

Here is another example. The supporting beam (a, b) and its momentary context are shown in the succeeding diagrams.



The instantaneous behavior of the beam can be completely described in terms of the internal and external structural arrangements and forces existing for it at a particular instant without regard for what is outside of points a and b. However, if more than an infinitely small time interval is involved, more is required: it is essential to know the structural and dynamic contexts of the intersection points a and b. The properties of contact point b, in this case, can be defined in terms of its position on the rim of a wheel of a certain diameter and motion, and the properties of point a by its position as the center of the wheel. Knowing for example that b is on the rim of a wheel moving forward at 50 miles an hour tells us immediately that there will be a cyclical change in the forward movement of b between zero and 100 miles an hour, with corresponding changes in the strength and direction of the forces and in the behavior of the beam.

This is true of the ecological environment of persons, too. A person's momentary behavior is completely determined by his life space, but

if we wish to understand more than the immediate, cross-section of the ongoing behavior stream, knowledge of the ecological environment is essential. For example, giving and receiving love between mother and child is an important variable in some theories of psychological development. From the developmental viewpoint, such an exchange takes part of its significance from the total context of the mother's and the child's life. It is important to know the larger ecological situation within which this type of contact occurs because this is often, technically, the only way to understand what actually happens at the momentary intersection between the person and the ecological environment. But, more important, knowledge of the ecological context is essential because development is not a momentary phenomenon (in fact, most behavior in which we are interested is not momentary), and the course of the life space can only be known within the ecological environment in which it is embedded.

#### Problem of Structure

The most primitive and simple thing we know about the ecological environment is that it has structure; it has parts with stable relations between them. One task is to describe this structure.

It is clear that structure cannot be discovered by observing a single part, such as the point of intersection of the environment with a particular person, or by considering the parts separately, one by one. For example, a complete description of a player's behavior in a ball game, or the complete statistics of all the plays occurring in the game does not reveal the game of baseball. It is the rules of the game, and the arrangement of things and people according to the rules, which constitute the essential, unitary ecological environment of the players; it is these that shape the

life space of each player. By dealing with such contexts in terms of their discriminable parts, and processing them by probability statistics, we destroy what we are searching to discover. This approach has the value of a filing system, or of a concordance; but we cannot understand a book from its concordance. By these methods, the structure of the context is dismantled and rearranged; the structure is destroyed.

This does not mean, of course, that such investigations are without value. Important information about one level of a functioning system can be obtained when the system is dismantled. All sciences have structure-destroying methods and make valuable use of them. Essential components of the brain can be determined by excising and mascerating brain tissue and analyzing it by physical and chemical techniques, even though this ignores or destroys the brain's macro-structure.

But most sciences have, also, special nondestructive techniques for studying the structure of their phenomena. X-ray analysis, and electrical, magnetic, and resonance techniques are instances. A primary concern of geologists, oceanographers, cytologists, mineralogists, geneticists, astronomers is precisely with the naturally occurring, unarranged structure of things: from chromosomes to the solar system and beyond. So it is important for psychology to discover tender-minded nondestructive techniques for preserving intact naturally occurring behavior and its ecological environment. Here are some guides for this discovery from general ecological methodologies translated into terms of behavior phenomena.

1. The behavior with which one is concerned must be identified. There are many levels of behavior, each of which has a special environmental context. In the present case we are interested in molar behavior, in the behavior of persons as undivided entities; we are not interested in the behavior of eyelids or glands.



2. The problem of identifying and describing the ecological environment of behavior is an empirical one. It is necessary to observe and describe the environment in order to develop theories which later can guide further empirical investigation.
3. The identification of the ecological environment is aided by the fact that, unlike the life space, it has an objective reality "out there"; it has temporal and physical attributes.
4. Since the physical-temporal world is not homogeneous, but exists in natural parts with definite boundaries, the ecological environment occurs in bounded units. Arbitrarily defined physical-temporal units will not, except by chance, comprise an environmental unit. Furthermore, the boundaries and characteristics of the ecological environment cannot be determined by observing the persons within it.
5. The individual persons within a bounded unit of the ecological environment differ in psychological attributes; their behavior in the same environment will, therefore, differ.
6. However, since people en masse can be expected to have common attributes, the inhabitants of identical ecological units will exhibit a characteristic over-all extraindividual pattern of behavior; and the inhabitants of different ecological units will exhibit different over-all extraindividual patterns of behavior.
7. In summary, the ecological environment of a person's molar behavior consists of bounded, physical-temporal locales and variegated but stable patterns in the behavior of people en masse.

These characteristics of the ecological environment and behavior are familiar to laymen. The dictionary defines common ecological words in terms of both their physical-temporal and their extraindividual behavior coordinates, thus,

road: a track (physical attribute) for travel or for conveying goods  
(extraindividual pattern of behavior)

store: any place where goods (physical attribute) are kept for  
sale (extraindividual behavior pattern)

park: a piece of ground (physical attribute) kept for ornament or  
recreation (extraindividual pattern of behavior).

An analysis of all descriptions of behavior occurring in one newspaper revealed that about 50 per cent of the reports were in terms of ecological units, including their synomorphic behavior patterns (Barker and Wright, 1955). Examples: "The Corner Drug Store will hold a sale on Friday and Saturday," "The Midwest High School Commencement was held last Tuesday." Such physical-behavioral units are common phenomenal entities, and they are natural units in no way imposed by an investigator. To laymen they are as objective as rivers and forests, and they can be defined by denotation; they involve, in the beginning, no theories or concepts; they are parts of the objective environment that are experienced directly as rain and sandy beaches are experienced.

## CHAPTER 2

### Ecological Units

Roger G. Barker

An initial practical problem of ecological research is to identify the natural units of the phenomenon studied. The essential nature of the units with which ecology deals is the same whether they are physical, social, biological or behavioral units: (a) they occur without feedback from the investigator, they are self-generated; (b) each unit has a time-space locus; (c) an unbroken boundary separates an internal pattern from a differing external pattern. By these criteria, an electron, a person, and a water fall are ecological units. This is true also, of most towns and cities; and within a city, it is true of a particular school, of the geometry lesson within the school, and of student Joe Duke raising his hand to ask to recite. On the other hand, a square mile in the center of a city is not an ecological unit since it is not self-generated; neither are the Republican voters of the city or the school system since they have no continuously bounded time-space loci.

Many ecological units occur in circumjacent-interjacent series, or assemblies. A chick embryo, for example, is a nesting set of organs, cells, nuclei, molecules, atoms, and subatomic particles. In these assemblies, the number of included levels is sharply restricted (in the 14-day chick embryo, for example, there are nine or ten levels of units); at each level there are a limited number of discriminable varieties of units (at the level of organs in the chick embryo there are about 40 varieties of units); and within each variety there are differing numbers of individual units (within the organ variety heart there is a single unit).

Within this arrangement, each circumjacent assembly is reciprocally linked with the interjacent units of which it is composed. This is clearly exemplified by the relation between words, punctuation marks and sentences: words and punctuation marks form sentences from which, in turn, the words and punctuation marks derive their precise meanings.

This raises the theoretical problem, mentioned in Chapter 1, of accounting within a univocal explanatory theory for the reciprocal relations between different levels of phenomena. How, for example, can we account for the fact that a gas molecule behaves according to the laws of molecular motion, and at the same time according to the entirely different laws of the jet of gas of which it is a part? How can the explanations of the movement of a train of wheat across the Kansas plains by an economist (a scientist of circumjacent assemblies) and by an engineer (a scientist of interjacent units) ever be incorporated into a single theory? Both the laws of economics and the laws of engineering are true; both operate in predictable ways upon the train, but they are as utterly incommensurate as the price of wheat in Chicago and the horsepower of the engine. How can we ever subsume the laws of motivation that are true for individual children and teachers and the principles of institutional operation within one system of concepts?

The difficulty in all of these cases resides in the fact that the "laws" that govern individual units are different from those applicable to the compound, circumjacent series, or assemblies, of units; yet units and unit assemblies are closely coupled.

Our work is in behavioral ecology, and we are concerned with molar behavior and the ecological contexts in which it occurs. The problem can be illustrated by an example.



Anne Matson was 10 years and 11 months of age and in the sixth grade of the Midwest public school. It was 2:09 p.m. and time for the daily music lesson with Miss Madison. The first five minutes of the record, made at the time (March 8, 1951),<sup>1</sup> reported Anne's behavior as follows:

Mrs. Nelson said in a business-like manner, "All right, the class will pass."

Anne picked up her music book from her desk.

She stood.

She motioned urgently to her row, indicating that they should follow her around the front of the room.

The class filed out, carrying their music books.

Anne walked quickly to the music room; she was near the end of the single-file line.

2:10 The children seated themselves in a semi-circle across the front of the music room.

Anne sat with Opal Bennet directly on her right and Rex Graw on her left. Alvin Stone was one seat over from Rex.

Miss Madison, the music teacher, said briskly, "All right, let's open our books to page 27."

Anne watched Miss Madison solemnly.

Anne licked her finger.

She turned to the correct page.

Miss Madison asked the class, "How would you conduct this song?"

Immediately Anne raised her hand urgently, eager to be called on.

2:11 Miss Madison called on Ellen Thomas to show how she would conduct this song.

Ellen waved her right arm in  $3/4$  rhythm.

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<sup>1</sup>This record is quoted from Specimen Records of American and English Children by Barker et al., University of Kansas publications, pages 96-98.

Miss Madison watched Ellen critically.

With her hand still part way in the air, Anne watched earnestly.

Someone in the class objected that Ellen's beat wasn't quite right.

Persistently, Anne put her hand up higher wishing to be called on.

Miss Madison called on Stella Townsend.

Anne put her hand down with disappointment showing in her facial expression.

Intently she watched Stella demonstrate the pattern for conducting the song.

Miss Madison called on Opal Bennet.

Anne didn't raise her hand.

There was really no opportunity for hand-raising.

She turned toward her right.

With interest she watched Opal demonstrate the way to lead the song.

Miss Madison demonstrated how three-four time should be led.

Anne watched with an interested expression.

2:12 She started to practice, moving her arms in the demonstrated pattern.

Some of the other children also started practicing.

Miss Madison said pedagogically, "All right, let's all do it together."

She stood sideways in a business-like way so that the children could see her hands.

She led the children as they all practiced conducting three-four time.

Anne let her fingers hang loosely in a consciously graceful manner.

With restraint and enjoyment she moved her arm up, down, and across in the correct pattern.

2:13 Miss Madison said, "Now we want one person to get up in front of the class and conduct."

Anne immediately raised her hand very eagerly straight up into the air.

On her face was a look of expectancy.

She held her hand in the air until Miss Madison called on Ellen Thomas.

Anne exchanged looks with Opal Bennet, apparently communicating about something of private significance.

She held her book up several inches off her lap expectantly.

She was sitting quite straight.

Miss Madison started the music on the piano.

Ellen started to conduct.

Anne sang the first few notes of the song.

Miss Madison stopped playing.

She showed Ellen how to begin the first beat.

As Miss Madison made the correction, Anne smiled sympathetically at Ellen.

Ellen smiled back.

Miss Madison resumed playing and Ellen conducted.

Anne sang.

2:14 Anne glanced alternately at her book and at Ellen who was conducting.

She sang heartily and seemed to enjoy it a great deal.

This is an example of the dependent variable with which we are concerned, namely, a child's behavior. We might have obtained the data in another way; in fact, in the research to be reported, we secured information

about the children's behavior and experiences by directly questioning them. For example, 16-year-old Joan Bell reported that she "was in the cast of the Junior Class play"; and that the best thing about it for her was "it gave me a chance to be someone else for a change."

We have raised the question: What are the ecological contexts of such behavior?

There are an infinite number of discriminable phenomena external to any individual's behavior. In the case of Anne Matson during the music class there were, for example, her neighbors Opal and Rex, the music book, the song on page 27, the piano, the fifth and sixth grade classroom across the hall, the cool overcast day, the town of Midwest, the country of U.S.A.; there were Anne's hand, the windows of the room, Andrea French sitting five seats away, Ellen's smile, and so on without limit. With which of these innumerable exterior phenomena was Anne's behavior linked? And were these phenomena related only via their links with Anne, or did they have a stable independent structure; were they an ecological assembly of units independent of Anne and her behavior?

How does one identify and describe the environment of behavior? Students of perception have been centrally concerned with this problem and they have had some success in dealing with it. When perception psychologists have turned from the nature of perception to the preperceptual nature of light and sound, they have discovered something very important about the ecological environment of vision and hearing: it is not random; it involves bounded manifolds of individual elements with varied and unusual patterns. The environment of vision and hearing has a structure that is independent of its connections with perceptual mechanisms. All science reveals that nature is not uniform; the environments of atoms and molecules, of cells and of



organs, of trees and of forests are patterned and structured, and this greatly facilitates their identification.

It would appear that students of molar behavior might profitably emulate students of perception, and look at the ecological environment of the behavior with which they are concerned entirely aside from its connection with behavior. It is, in fact, one of the primary intentions of the present research to advance the science, for which we as yet have no name, which stands with respect to molar behavior as the physics of light and of sound stand with respect to vision and hearing. For students of education this means that schools must be studied as carefully as the behavior of the children within them.

An analogy may help to make the problem clear.

If a novice, an Englishman for example, wished to understand the environment of a first baseman in a ball game, he might set about to observe the interactions of the player with his surroundings. To do this with utmost precision he might view the first baseman through field glasses, so focussed that the player would be centered in the field of the glasses, with just enough of the environment included to encompass all the player's contacts with the environment, all inputs and outputs: all balls caught, balls thrown, players tagged, etc. Despite the commendable observational care, however, this method would never provide a novice with an understanding of "the game" which gives meaning to a first baseman's transactions with his surroundings, and which in fact, constitutes the environment of his baseball playing behavior. By observing a player in this way, the novice would, in fact, fragment the game and destroy what he was seeking. So, he might by observations and interviews construct the player's life space during the game: his achievements, aspirations, successes, failures, and conflicts; his judgments of the speeds of the ball, of the fairness of the umpire, of the errors of his teammates. But this would only substitute for the former fragmented picture of "the game" the psychological consequences of the fragment, and thus remove the novice even further from the ecological environment he sought. Finally, the novice might perform innumerable correlations between the first baseman's achievements (balls caught, players tagged, strikes and hits made, bases stolen, errors, etc.) and particular attributes of the ecological environment involved (speed of balls thrown to him, distance of throw, weight of bat, curve of balls, etc.). But he could never arrive at the phenomenon known as a baseball game by this means.

It would seem clear that a novice would learn more about the ecological environment of a first baseman by blotting out the player and observing the game around him. This is what the student of light and sound does with elaborate instrumentation, and it is the approach we have taken in the present studies.

It is not easy, at first, to leave the person out of observations of the environment of molar behavior. Our perceptual apparatus is adjusted by our long training with the idiocentric viewing glasses of individual observations, interviews, and questionnaires to see persons whenever we see behavior. But with some effort and experience the extraindividual assemblies of behavior episodes, behavior objects and space that surround persons can be observed and described. Their nonrandom distribution and bounded character are a crucial aid. If the reader will recall a school class period, some of the characteristics of an environmental unit will be clearly apparent:

1. It is a natural phenomenon; it is not created by an experimenter for scientific purposes.
2. It has a space-time locus.
3. A boundary surrounds a school class.
4. The boundary is self-generated; it changes as the class changes in size and in the nature of its activity.
5. The class is objective in the sense that it exists independent of anyone's perception of it, qua class; it is a preperceptual ecological entity.
6. It has two sets of components: (a) behavior (reciting, discussing, sitting) and (b) nonpsychological objects with which behavior is transacted, e.g., chairs, walls, a blackboard, paper, etc.
7. The unit, the class meeting, is circumjacent to its components; the pupils and equipment are in the class.
8. The behavior and physical objects that constitute the unit school class are internally organized and arranged to form a pattern that is by no means random.
9. The pattern within the boundary of a class is easily discriminated from that outside the boundary.
10. There is a synomorphic relation between the pattern of the behavior occurring within the class and the pattern of its nonbehavioral components, the behavior objects. The seats face the teacher's desk, and the children face the teacher, for example.

11. The unity of the class is not due to the similarity of its parts at any moment; for example, speaking occurs in one part and listening in another. The unity is based, rather, upon the interdependence of the parts; events in different parts of a class period have a greater effect upon each other than equivalent events beyond its boundary.
12. The people who inhabit a class are to a considerable degree interchangeable and replacable. Pupils come and go; even the teacher may be replaced. But the same entity continues as serenely as an old car with new rings and the right front wheel now carried as the spare.
13. The behavior of this entity cannot, however, be greatly changed without destroying it: there must be teaching, there must be study, there must be recitation.
14. A pupil has two positions in a class; first, he is a component of the supra-individual unit, and second he is an individual whose life space is partly formed within the constraints imposed by the very entity of which he is a part.

This entity stands out with great clarity, as we have pointed out in Chapter 1; it is a common phenomenon of everyday life. We have called it a K-21 behavior setting. We have made extensive studies of K-21 behavior settings and found much evidence that they are stable extraindividual units with great explanatory power with respect to the behavior occurring within them (Barker and Wright, 1955; Barker, 1961). It is the central hypothesis of our studies that K-21 behavior settings constitute the ecological environment of molar behavior, and the theory of them, based upon the earlier work, provides the guides for the investigations.

According to the theory of behavior settings, a person who inhabits and contributes behavior to one of them is a component part, a fixture of a behavior setting. As such, he is anonymous and replacable, and his behavior is subject to the nonpsychological laws of the superordinate unit. At the same time, however, every inhabitant of a behavior setting is a unique person subject to the laws of individual psychology where his own private motives, capacities, and perceptions are the causal variables. This is the classical inside-outside paradox, involving in this case



persons who are governed by incommensurate laws on different levels of inclusiveness.

One of the sticking points of social and educational psychology is how to account for the consensus, the norms, and the uniformities associated with school classes, business offices, and church services, for example, and at the same time account for the individuality of the members. This problem cannot be solved by either individual or group psychology. It requires a different conceptual treatment, the unnamed science, mentioned earlier. In the remainder of this chapter, we shall sketch the theory that has guided this research, and which appears to account for one small facet of this inside-outside paradox.

#### Theory of Behavior Settings

In order to make the discussion more concrete, sample behavior settings from the high schools in which most of the research was done are listed. These are presented in groups of similar settings from different schools.

Biology and Health Classes, Mr. Campbell (Malden)  
Chemistry, Biology, Physics Classes, Mr. Johnson (Midwest)  
Physics, Biology, General Science Classes, Miss Smith (Vernon)  
Physiology Class, Miss Williams (Walker)  
Chemistry Classes, Mr. Jones (Capital City)

Vocal Music Classes, Miss Harris (Malden)  
Vocal Music Groups, Miss North (Midwest)  
Vocal Music Groups, Miss West (Vernon)  
Vocal Music Group, Mr. Field (Walker)  
Girls' Chorus Classes, Mr. McGregor (Capital City)

Basketball, Boys' A and B Teams and Girls' Team at Home (Malden)  
Basketball, Boys' A and B Teams and Girls' Team at Home (Midwest)  
Basketball, Boys' A and B Teams at Home (Vernon)  
Basketball, Boys' A and B Teams and Girls' Team at Home (Walker)  
Basketball, A Team at Home (Capital City)



After Game Dance at Legion Hall (Malden)  
Dance Following Football Game (Midwest)  
Sock Hop (Vernon)  
Student Council Dance after Game (Walker)  
Varsity Dance after Game (Capital City)

Junior Class Play (Malden)  
Junior Class Play (Midwest)  
Junior Class Play (Vernon)  
Junior Class Play (Walker)  
Junior Sponsored Play (Capital City)

High School Principal, Office (Malden)  
Grade and High School Principal, Office (Midwest)  
High School Principal and School Supt., Office (Vernon)  
High School Principal, Office (Walker)  
High School General Office (Capital City)

Pep Club Car Wash (Malden)  
Junior Car Wash (Midwest)  
Senior Car Wash (Vernon)  
Junior Class Work Day (Walker)  
Junior-Senior Prom Committee Car Wash (Capital City)

Home Economics Class to the City (Malden)  
Drama Club to "My Fair Lady" (Midwest)  
Constitution Class Tours State Capitol (Vernon)  
Band Attends U. S. Navy Band Concert (Walker)  
Science Students to Math, Science Day at University (Capital City)

Key Club Meetings (Malden)  
Drama Club Meetings (Midwest)  
Future Homemakers Meetings (Vernon)  
Y Teens Meetings (Walker)  
Thespians Meetings (Capital City)

Behavior settings, such as these, are organized assemblies of behavior episodes, physical objects, spaces, and durations. Few things can be clearer in terms of direct experience than their coercive power over individuals, no one dances in Mr. Johnson's chemistry class and no one carries out chemistry experiments at the Sock Hop. Despite this, behavior settings have largely escaped the attention of behavioral scientists. We have to look to novelists, dramatists and pictorial artists for descriptions of them. It is interesting to note, however, that there is evidence of a concern by town planners, highway engineers, human factors scientists, industrial designers, and architects for example, for a science of behavior settings.

Despite the primitive state of knowledge regarding behavior settings, earlier studies have provided a first step toward an understanding of them (Barker and Wright, 1955; Barker, 1960; Barker and Barker, 1961). According to the theory developed, a setting is a homeostatic system with controls that maintain the setting intact and operating at a stable functional level under widely varying conditions. These forces have multiple, independent origins, and this is one reason for the stability of settings. Some of the controls reside within the setting itself; in a school class, there is the time schedule, the "rules," the arrangement of the room. Some controls involve input and feedback circuits which couple the setting with exterior conditions; the whole school has its independent schedule and regulations and ways of requiring conformity by the individual class. Other controls involve feedback loops linking the setting with its inhabitants and other of its interior components; the maturity of the pupils and the textbook are examples of interior controls.

A second part of the theory is this: a setting and the behavior episodes that comprise it stand in the relationship of thing to medium, respectively. The terms thing and medium are used here in the way Heider (1959) defines them. Things are entities which are internally constrained. They have internal forces that impose patterns upon their own internal components, and upon external entities that are coupled with them. A chair is a thing with respect to its own parts (its legs, its back, its arms) and it is a thing with respect to persons who sit upon it: its form is impressed upon them. A sentence is a thing with respect to the words that compose it and with respect to the meaning a reader gets from it. The components of a thing have little freedom; an increase in their freedom leads to the destruction of the thing. Things are not docile.

A medium, on the other hand, is externally constrained; its freedom is not limited by its own internal arrangements but by external forces that play upon it. The parts of a chair, when it is dismantled, and the words of a sentence, as they occur in a dictionary, have relatively high medium-quality. An appropriate external force may impose any of a wide range of forms upon them: the parts of the chair become a bed or a rose trellis; the words of the sentence express another idea. A medium is docile.

Thing-medium relationships of different sorts are common in nature. According to Heider's analysis, the possibility of perception at a distance depends upon it. Molecules of the air are media with respect to a vibrating tuning fork which stands as a thing in relation to them. It is because of this relationship that the molecules can transmit the wave pattern imposed upon them by the fork. Small interjacent entities are frequently media vis-à-vis the circumjacent units they compose. A jet of gas issuing under pressure from a small opening of a container is an example: the molecules of the gas are the media of the jet. The jet is the super-ordinate thing; it constrains, according to the laws of gaseous jets, the behavior of the molecules, which still, however, behave according to molecular laws (of thermal agitation, for example).

In this and every case where a system is made up of an entity and its component media, the characteristics and laws of the interior elements, the media, are different from those of the entity, the thing; yet the two are closely coupled. The laws of molecules are not the laws of gas jets. It is such facts as these that present all science with a fundamental problem: how to account for and incorporate phenomena as disparate as molecules and gas jets, words and sentences, behavior episodes and behavior settings within a single system of understanding.

According to Heider a medium is always a composite entity, a manifold of elements; medium-quality is a property of the manifold, not of the elements separately. A single element of such a manifold has thing-properties to a high degree; a single molecule, a single word, a single music pupil, a single throw of a ball have limited medium-quality. Multiple, independent elements are essential. Other things being equal then, the number of parts of a manifold of entities is directly related to the medium potentialities of the manifold. A baby's single word provides it with a poor medium for expressing its much-more-than-single desires; 270 words at two years are a better verbal medium; with a 1000-word vocabulary more can be said better. There are many ways in which the medium-quality of a medium is reduced; one of them is by a reduction in the independence, i.e., the flexibility of the parts; another is by a reduction in the number of elements in the medium manifold.

The third part of the theory of behavior settings can now be presented. There is for every homeostatic level of a setting an optimal number of elements in its internal, medium manifold. The setting baseball game, calls for the behavior of 20 participants, 18 players and 2 officials; in Midwest, the setting First Grade Academic Activities is believed to do best with the behavior of 23 inhabitants, 22 pupils and one teacher. For the position of pitcher a variety of actions is required. However, and this is crucial, the homeostatic mechanisms of a setting operate to maintain the setting intact, and its functional level essentially unchanged when the medium-quality of its component manifold is reduced by reason of a decrease in the number of its interior units below the optimal level. This can occur, of course, only within limits. But to the degree that it does occur, certain consequences follow for the persons who provide the behavior manifold of the setting.



Two consequences may be stated as follows:

1. The range in the direction of the forces acting upon individual inhabitants, and upon particular behavior units, increases.
2. The strength of the forces acting upon the individual inhabitants, and upon particular behavior units, increases.

There is nothing mysterious about this, it is simple arithmetic: so long as the homeostatic controls maintain the functional level of the setting, the same pattern and strength of forces is distributed among fewer persons and behavior units. There are, in Allport's terms, fewer junction points, or encounters, but the same number of forces and events (1955). Each point is therefore the focus of more forces and the locus of more events. Accordingly, the fewer available persons are pressed more strongly to produce the same number and variety of behavior units, and fewer behavior units are pressed to produce the same number and variety of achievements.

We come, now, to the final link in the theory. A setting is a place where most of the inhabitants can satisfy a number of personal motives, where they can achieve multiple satisfactions; a setting contains opportunities. Furthermore, different people achieve a different cluster of satisfactions in the same setting. The unity of a behavior setting does not arise from similarity in the motives of the occupants. In the setting Baseball Game, for example, the pitcher will experience a complex system of social-physical satisfactions, depending upon what kind of a person he is; his mother in the bleachers will at the same time have quite a different set of satisfactions; and the coach will have still others. But unless these and other inhabitants of a baseball game are at least minimally satisfied, they will leave, or will not return on another occasion, and the setting will cease. In other words, a setting exists only when it provides its occupants with the particular psychological conditions their own unique

natures require. Heterogeneity in the personal motives of the individual inhabitants of a setting contributes to the stability of the setting.

Settings impose obligations upon their occupants, too. These arise via the intrinsic structure of the setting and the inhabitants' perception thereof. If the inhabitants of a setting are to continue to attain the goals which bring them satisfactions, the setting must continue to function at a level which each occupant defines for himself. Every occupant of a setting, therefore, encounters two routes: one is the immediate, direct route to his goals; and the other route is directed toward maintaining the setting in such condition that the goals, and the routes to them, will remain intact. When an occupant of a setting sees that it threatens to change in such a way as to reduce the valence of the goals it provides him, or to increase the resistance of the paths to these goals, an increase occurs in the forces along the routes which maintain the setting. The amount and direction of the increase depend upon the degree of the perceived threat, upon the person's perception of its sources and the most promising ways of countering the threat, and upon the valence for the occupant of the goals within the setting.

The primary link between settings and behavior is via the inhabitants' cognitions of the relation between the goals and the routes the setting provides. The inhabitants of a setting need not comprehend the setting as a phenomenal unit of their own life spaces, but they must comprehend some at least, of its structural and dynamic arrangements, and be aware of changes in them. Most settings include more than one member, so the perceptions mentioned do not involve a single person, but all members of the setting. One direction of most of the inhabitants' maintenance forces is toward getting others to act along maintenance channels, too. These interlacings of obligations strengthen greatly the total coercive power of a setting, and homogenize, so to speak, the source of its forces.

It is the resultant of such adjustment circuits which keeps a setting on a quasi-stationary level, or moving toward a more satisfying level for the inhabitants. Sometimes, of course, the forces along the maintenance routes are too weak, and the setting deteriorates.

#### Some Dynamics of Individual Behavior

Let us return to the consequences of a reduction of the number of interior elements of a behavior setting below that required by the homeostatic mechanism of the setting. We shall apply the theory to the case of two high schools similar in all respects except number of students and staff. Here is the argument:

1. People (students and staff) provide the component media of behavior settings of a school.
2. The behavior settings are homeostatic systems with optimal media requirements at each homeostatic level.
3. The homeostatic mechanisms maintain the functional level of the setting when the inhabitants fall below the optimum number, within a limited range.
4. The behavior settings of small and large high schools are equivalent in all respects, except
5. the settings of small high schools are more frequently below the optimal level with respect to number of inhabitants than those of large high schools; therefore
6. the inhabitants of small high schools in comparison with those of large high schools are
  - a. pressed by stronger forces
  - b. in more varied directions.

The phenotypic expression of these predictions takes many forms which have been presented in detail elsewhere (Barker, 1960, pp. 31-34). We quote from this statement:

1. The behavior consequences of the stronger forces acting upon students of small high schools, in comparison with those of large high schools, will be:
  - 1.1 Greater effort. Greater individual effort can take the form of "harder" work or longer hours. The greater effort is directed



both toward the primary goals of the setting and along the maintenance routes. When the assistant yearbook editor leaves with no one available for replacement, the editor proofreads all the galleys, instead of half of them.

- 1.2 More difficult and more important tasks. There is in most settings a hierarchy of tasks with respect to difficulty and importance. The inexperienced sophomore has to take the lead role in the play when the experienced senior becomes ill.

The primary sources of these changes have been identified. They are greatly enhanced in social behavior settings by the individual's perception of increased rate of work by others, and by increased social pressure from others. One maintenance route for all members is to encourage and indeed to force others to work hard also. These ramifications of influence increase still further the strength of the claim; they also generalize the claim of a setting so it becomes a property of the whole setting.

2. Behavior consequences of greater range in the direction of the forces acting upon students of small high schools

- 2.1 Wider variety of activities. Each occupant is called upon to fill more positions and play more roles in the setting. The director of the small choir also plays the organ. This primary resultant has many ramifications and manifestations; it involves perception as well as overt behavior. The person sees himself as suitable for previously "inappropriate" tasks. It involves people as well as nonsocial situations. The person has to meet and interact with a greater proportion of the total variety of people present.

- 2.2 Less sensitivity to and less evaluation of differences between people. This will usually be in the nature of ignoring differences previously noted, and exhibiting increased tolerance of those noted. It is a direct manifestation of the greater variety in the direction of forces; under their influence not only does the person see himself as suitable for new roles, but he sees others, too, as more widely suitable. Undoubtedly the increased strength of the behavior setting forces aids this process, too. Recalcitrant media (the self and others) become more docile. Here we enter the field of values, at least on a functional level. When essential personnel are in short supply, it is necessary to "accept" those persons who are available and can do the job.

- 2.3 Lower level of maximal performance. By reason particularly of the demands of great versatility, which introduce interfering skills, but also because of the greater effort and longer hours, with consequent fatigue, the maximal level of a person's achievement in



any particular task is reduced. The soloist of the chorus who is also conductor, organist, and librarian is less able to excel in one of these tasks than if he were able to devote all of his time to it. This tendency may be enhanced in a social setting where an individual's performance requires others' support, as is often the case; it is easier to pitch a superlative ball game if the fielders can catch the ball.

3. Behavioral consequences of the joint influence of greater strength and greater range in the direction of forces acting upon students of small high schools

3.1 Greater functional importance within the setting. With increasing scarcity of population, the people who remain become ever more essential. A stage is sometimes reached where everyone is a key person; this happens when everyone in the setting is in one or more essential jobs, with no substitutes available.

3.2 More responsibility. In striving to maintain the setting for his own personal reasons, the individual in a setting where population is scarce is also contributing something essential to the other inhabitants of the setting, who may have quite different interests and motives. A high school student wants to study second-year Latin, and by doing so assures Sue and Joe and Mary, who want the class, too, that it will be held. He, and all the others, achieve "Latin plus appreciation." Responsibility is experienced by a person when a behavior setting, and what others gain from it depend upon him. This in most cases amounts to adding a new set of social goals to the setting, or of increasing the valence of an existing set.

Both functional importance and individual responsibility are attributes experienced by a person himself, and by his associates. They do not occur to so large a degree in optimally populated settings, and not at all in overpopulated settings. A setting that is truly optimally populated does not burden itself with indispensable personnel; people are too unreliable. Substitutes, vice-presidents, committee members in excess of the quorum requirement, a second team: these are regular features of optimally manned settings.

3.3 Greater functional self-identity. A decrease in the population of a behavior setting below the optimum for the setting qua setting is accompanied by a change from preoccupation with "What kind of a person am I?" and "What kind of a person is he?" to "What has to be done?" and "Who can do this job?" This is a major shift. It is closely related to the importance and variety of jobs to be done, but it is grounded also in well-established perceptual laws. A functionless person, as is necessarily true of many in an overpopulated setting, and to some degree in an optimally populated setting, has only personal attributes and potential functions (e.g., abilities, aptitudes). The only functional relations he can have are the interpersonal ones of being liked or not being liked, of being judged and evaluated by others, and by himself. Thus, "What kind of a person am I? (is he?)" becomes of central importance; it creates a highly personal and egocentric situation. Here, too, the person is in the position of a figure against an undifferentiated

background, where small differences are clearly seen. Individual differences become important, and the innumerable ways of sorting and classifying people become prominent.

But a person with a function, as is necessary in an underpopulated setting, is more than a person; he is a person in a complicated behavioral context, and he is judged within this context. Fine discriminations as to the kind of person he is are difficult to make. There is less possibility, and need to classify functioning people with respect to the kind of people they are. The question becomes "Is the job coming off?" If it is an important job, and it is coming off, the person takes on the value of this achievement no matter what "kind of a person" he is. Personality analysis (by self and others), including subtle testing, sorting, and classifying people, is a feature of overabundantly populated settings.

- 3.4 Lower standards and fewer tests for admission. A baseball game of two members can scarcely maintain the semblance of the setting although it occurs in this emasculated form in Midwest, with a batter-catcher and the pitcher-fielder. The claim of such a setting upon potential participants is very strong indeed, so strong that it will accept, solicit, even impress a five-year-old player or a parent into the setting. We are all familiar with the change in personnel policies when the prime sources of manpower are withdrawn from settings, as during a war. Age, sex, and ability tests for admission to settings are changed and the formerly rejected members are welcomed: women operate lathes, sixteen-year-olds supervise work crews, and retired professors are reprieved. The lower selectivity of behavior settings relatively deficient in occupants is closely related to the greater range of direction of the forces operating upon them; see paragraph 2.2.
- 3.5 Greater insecurity. Under the pressure of engaging in more difficult and more varied actions, a person in an underpopulated setting is in greater jeopardy of failing to carry through his tasks. To his personal uncertainty is added that which arises from lack of reserves in the behavior setting as a whole. The latter amounts to increased dependence upon every other person carrying through his assignments.
- 3.6 More frequent occurrences of success and failure. The underpopulated setting, by providing a situation where high aspirations (in relation to ability) are encouraged in important actions, but encouraged without authoritative coercion, provides a place for the flowering of success experiences, and also of failure experiences. The underpopulated setting is one where self-esteem and social status can both flourish, and also wither. The degree of the success and of the failure a person achieves is related to his evaluation of the importance of the setting in which the experience occurs.

The last sentence raises an important issue: All of the consequences of underpopulated settings that have been mentioned have

been made as relative statements: they describe the behavior to be expected in an underpopulated setting in comparison with that which occurs in the same setting with an optimal number of inhabitants to maintain its homeostatic level. It is assumed that the settings are equally valued in both cases. In circumstances where the "same" small setting was undervalued ("this doesn't amount to anything") or overvalued ("this is exclusive") relative to the "large" setting, some of the predictions would have to be modified.

This is the theory that has guided the research we have done; we have assembled data with respect to a number of the predictions derived from the theory.

#### Identification of K-21 Behavior Settings

The reader will find that the behavior settings which are identified and described in the schools and towns which we have studied usually appear to be reasonable, commonsense parts. It must be emphasized, however, that the identification and enumeration of K-21 behavior settings is a highly technical task. Many reasonable, commonsense parts of institutions and communities can be identified which do not possess the distinguishing characteristics of K-21 behavior settings. It is essential that the operations for identifying K-21 behavior settings which are presented in detail in Midwest and Its Children (Barker & Wright, 1955, pp. 50-57, 489-495) be followed by investigators making use of them. The essential technical problem is to identify a single part as one or as more than one K-21 behavior setting; e.g., is the school office a single K-21 behavior setting or is it two K-21 behavior settings: the school principal's office and the secretary's office? This decision requires rating the K-value for the principal's office and secretary's office. The K-value is a rating of the degree of interdependence of the two parts in question. If the rating of K is below the cutting point we have chosen, i.e., 21, the two parts constitute a single setting, if the rating is above the cutting point the two parts are separate K-21 behavior settings.



### Varieties of Behavior Settings

The definition and description of behavior settings makes it clear that all settings have the same fundamental structural and dynamical characteristics, but that beyond these definitive attributes behavior settings vary widely. Like cells, crystals, and fishes, they display many different properties. The varying properties of behavior settings makes it possible to classify them narrowly or widely according to defined degrees of similarity upon one or several dimensions. Many classifications are possible and of value for particular problems. A number of different classifications are used in the studies which follow; the one most widely used is classification into varieties.

The behavior settings listed on pages 20 and 21 are grouped by varieties, and the behavior setting surveys given in Appendix 4 are organized by varieties. Behavior settings within one variety have a defined degree of similarity with respect to the following attributes: action patterns, behavior mechanisms, spacial arrangements, and behavior objects. The methods of rating these attributes of behavior settings, and the allowable intravariety variation in each, i.e., the required degree of similarity, are presented in detail in Barker and Wright (1955, pp. 57-58, 81-83). The permissible intravariety variation has been set at a level that produces varieties that correspond to classifications commonly made by laymen, e.g., Church Services and Classes, Lawyers' and Real Estate Offices, Food Stores. It should be clearly understood, however, that identification of varieties is made via precise predetermined criteria.



## CHAPTER 3

### Review of Research

Edwin Willems

Before we describe the research on schools and communities differing in size we shall summarize the results of the relevant empirical studies we have discovered in the literature. Few of these studies deal directly with schools or make explicit use of behavior settings as defined here, but all have implications for our work.

#### Laboratory Studies

On the basis of their review of laboratory studies of groups, Thibaut and Kelley (1959) conclude that "As the group becomes progressively smaller, its identity seems to become increasingly dependent on maintaining each one of its members" (p. 192). Elsewhere (Kelley and Thibaut, 1954) conclude that with increasing size of groups, (a) the proportion of members who are "uncontributors" increases, (b) most-active members become more and more differentiated from the rest of the group, and (c) become more similar to each other at low levels of participation.

Summarizing communication patterns in small experimental groups, Bales (1952, p. 155) concludes:

As groups increase in size, a larger and larger relative proportion of the activity tends to be addressed to the top man, and a smaller and smaller relative proportion to other members. In turn, as size increases, the top man tends to address more and more of his remarks to the group as a whole, and to exceed by larger amounts his proportionate share. The communication pattern tends to "centralize," in other words, around a leader through whom most of the communication flows.

Bales and Borgatta (1955) found that as group size increased, the numbers of persons who participated at low rates increased.

Comparing contrived discussion groups of different sizes in a Boy Scout camp, Hare (1952) found that there were more persons in larger groups who were dissatisfied with group discussions. In particular he found in the larger groups, as compared to the smaller, that (a) there was less consensus about discussion issues; (b) group members changed less toward consensus; (c) group members felt less often that they had enough time for discussion; and (d) those who felt they did not have enough time for discussion were dissatisfied with the results of the discussions.

Holding constant the number of task roles available, Bales (1953) discovered that as size of group increased, the average number of persons playing roles did not increase correspondingly, i.e., smaller proportions of group members played roles.

#### Field Studies

Baumgartel and Sobol (1959) conducted a field research on the effects of the number of personnel at the airports of an airline, and found size to be positively correlated with absenteeism. These researchers used the concept of "attractiveness" to account for their findings and hypothesized that in larger units individual employees operate under reduced attraction toward the work situation, and make more choices to stay away.

In an attempt to relate size of organization to "satisfaction," Katz (1949) observed, in various industrial organizations, that (a) higher group cohesion arose in smaller organizations, (b) employees in small work groups were more "satisfied," and (c) individual workers in small groups assumed more importance.

Worthy (1950) concludes: (a) "Mere size is unquestionably one of the most important factors in determining the quality of employee relationships; the smaller the unit the higher the morale" (p. 173); (b) in the smaller units

the employee's work becomes more meaningful to him; and (c) attraction to the organization and morale, or satisfaction, are negatively correlated to size.

Cleland (1955), predicted that personnel turnover, i.e., quitting and beginning, would be negatively correlated with size of industrial plants, but he found the reverse to be true; less turnover and absenteeism were found in smaller plants. Cleland explained this by the "intangible personal" approach, i.e., more intimate employer-employee and employee-employee relations, knowledge of personal circumstances, greater rapport, and an "open-door" policy which was found more frequently in small plants.

Reviewing findings from British data on the effects of size, Revans (1958) noted that:

- (a) the number of accidents per person increased with size in industry;
- (b) the probability of dying after an amputation increases with the size of the hospital;
- (c) the number of strikes in factories increased with size;
- (d) absence rates were positively correlated with size;
- (e) punctuality decreased with size;
- (f) buying of professional periodicals was negatively correlated with size of coal mines and commercial organizations;
- (g) output decreased with size;
- (h) compensable accidents increased in rate with size.

Revans explains these findings in terms of more "vertical" (supervisor-employee) and "horizontal" (employee-employee) separation, and lower supervisor ratios (more employees per supervisor) in large organizations.

According to Tallachi (1960), increasing size leads to (a) increased division of labor, job specialization, and status differentiation, which lead to (b) decreased satisfaction and morale, and thereby to (c) avoidance by absenteeism and turnover. In 93 industrial organizations, negative correlations

were found between size and satisfaction, and again between satisfaction and absenteeism.

Indik (1961, p. 2) states:

We are hypothesizing that the size of the organization as a social structural fact influences member participation indirectly through its effect on specific organizational processes such as those relating to communication, control, task specialization and coordination. These processes, in turn, affect the degree of attraction among organizational members, the amount of intrinsic job satisfaction derived by the members, and the degree of bureaucratic inflexibility felt by members. It is these latter variables that directly affect member participation rates.

Indik found that size of 96 business organizations correlated positively with difficulty of maintaining communication among members and negatively with participation, suggesting that greater size led to difficulty in communication, less attraction, and less participation.

Campbell (1952), as reported in Hewitt and Parfit (1953), examined the effects of size of work groups on the incentive effect of group payment schemes. He found that as size increased (a) the per cent of workers who did not understand the scheme increased, and (b) those workers who did not understand the scheme became progressively less satisfied with it, indicating that larger groups contained higher percentages of workers who were dissatisfied with work payment schemes. These findings agree with Hare's contrived discussion groups (see p. 34).

Marriot (1949), as reported by Indik (1961), found in two automobile factories that there was a consistent negative relationship between the size of the work unit and individual "productivity," or output.

The Acton Society Trust studies (1953) set out to investigate morale as related to size, using various behavioral and attitudinal variables as indexes of morale. It was found that interest in affairs of the organization and knowledge of names of administrators were negatively correlated with size, and



that acceptance of rumors was positively correlated with size. Voting on work unit issues, subscription to professional periodicals, output, and punctuality were negatively correlated to size. Absenteeism, accident rates, strikes, and waste were positively correlated with size. These findings were found to hold for various industrial and commercial organizations.

Hewitt and Parfit (1953) studied a factory of 1000 employees, and found a positive correlation between size of work "rooms," or units, and rates of nonsickness absence.

Eighty-three county welfare bureaus from the same state were studied by Thomas (1959). He discovered the following to be negatively correlated with size of the bureaus: (a) agreement among workers and supervisors on roles of social workers, (b) the number of activities seen as part of the social worker's role, (c) commitment to the ethics and ideals of social work, and (d) worker performance on the job, or output.

Wright (1961) has used behavior settings in an extensive series of studies of the living habitats, behavior, and experience of children in large and small towns. He has found that children in large towns enter a wider range of settings, but that children in small towns (a) have more positions of importance in settings, (b) re-enter settings more often, (c) spend more time in community settings, (d) find more of the same persons using the settings they enter, and (e) are more familiar with objects and people in the settings of their towns. There is also more crossing of paths and more familiarity with the broader community in the small towns. In terms of interpersonal transactions, children in the small towns initiate more greetings to other persons, experience more greetings from others, and are involved in more total interpersonal transactions.

In two publications which develop the theory of behavior settings, Barker (1960) and Barker and Barker (1961a) present data comparing an English town

with an American town. The English town was found to have more inhabitants per behavior setting than the American town. Within the English town, in comparison with the American town, (a) residents spent fewer hours per person per week in behavior settings; (b) they filled fewer positions of responsibility in behavior settings; (c) a higher per cent of the town's behavior settings were segregated with respect to age and social class; and (d) fewer behavior settings involved and depended upon children and adolescents for their functioning. The Barkers (1961a) found that the children of the American town in comparison with the children of the English town (a) participated in a wider range of settings, (b) were excluded from fewer settings, and (c) filled essential positions in more settings; and that the old people of the American town (1961b) (a) participated in a wider range of settings, (b) participated to a greater depth of penetration, and (c) participated for longer periods of time. The Barkers conclude that since, in the American town, people, including the extreme age groups, were in shorter supply and greater demand than in the English town, the average person was functionally more important to the town and its behavior settings.

LeCompte and Barker (1960) found that (a) in Rotary clubs, size is negatively correlated with attendance; (b) in churches, size of membership is negatively correlated with Sunday school attendance; and (c) in high schools, size is negatively correlated with participation music festivals.

Larson (1949) related size of high school to data on students' activities and relations to peers. A higher percentage of students in small schools as compared to medium and large schools reported that it was easy to make friends and that they liked all their school acquaintances. Higher percentages of students in large schools than in medium and small schools reported that they engaged in no activities or only one, and that they experienced difficulty in getting into activities.

A questionnaire study by Anderson, Ladd, and Smith (1954) involving 2500 high school graduates, found that the per cent of graduates who reported that their participation in extracurricular activities was "very valuable and useful" was negatively correlated with size of the school. Coleman (1961) found the following to be negatively related to size of high school: (a) per cent of boys who participated in football; (b) ability to name an outstanding fellow student in certain areas; and (c) consensus about persons in the student body who were outstanding in certain areas.

Isaacs (1953) reports that the per cent of retention (inverse of drop-outs) is negatively related to size of high schools in Kansas.

A type of school study that is only distantly related to the research reported here will not be reviewed, namely, the effects of high school and class size on the academic achievement of students (Harmon, 1961; Feldt, 1960; Hoyt, 1959; Gaston and Anderson, 1954; Ross and McKenna, 1955).

#### Implication for the Present Research

The theory presented in Chapter 2 predicted that in relatively undermanned settings there would be greater frequency, range, and depth of behavioral involvement than in more heavily populated settings and that these would be manifest (a) in both direct, consumatory actions and in behavior to maintain the setting, (b) in both solitary and in social (communicative) behavior, and (c) in both overt behavior and in subjective experience. Findings cited in the review of the literature, above, are discussed below in view of these expectations.

Frequency, Depth, and Range of Participation. Persons in smaller units: (a) are absent less often (Baumgartel and Sobol, 1959; Revans, 1958; Tallachi, 1960; Indik, 1961; Acton, 1953; Hewitt and Parfit, 1953; LeCompte and Barker, 1960); (b) they quit less often (Cleland, 1955; Tallachi, 1960; Isaacs, 1953); (c) they are more punctual (Revans, 1958; Acton, 1953); (d) when participation is voluntary, they participate more often (Larson, 1949; LeCompte and Barker,



1960; Wright, 1961; Coleman, 1961); (e) they participate in and have positions of importance in wider range of activities (Barker and Barker, 1961a, 1961b; Wright, 1961); (f) outperform persons in large units (Revans, 1958; Thomas, 1959; Acton, 1953; Marriot, 1949). The proportion of the group involved in task roles (Bales, 1953) and breadth of role conception (Thomas, 1959) favor small groups and organizations, as do buying of periodicals related to the professional organization (Revans, 1958; Acton, 1953) and interest in affairs of the organization (Acton, 1953). Persons in the smaller units are more familiar with the settings (Wright, 1961), and are more important to the settings and groups (Barker and Barker, 1961a; Katz, 1949; Thibaut and Kelley, 1959).

Communication and Social Interaction. Kelley and Thibaut (1954), Bales (1952), and Bales and Borgatta (1955), report greater individual participation in communication and interaction in the smaller groups, and less centralization of the communication around one or few persons. Wright (1961) reports more greetings per child in the small town, and more interpersonal transactions. Campbell (1952), in terms of clarity, and Indik (1961), in terms of decreased difficulty, find effects on communication which favor smaller organizations. Persons in smaller units occupy more cohesive groups (Katz, 1949), like all their acquaintances more often (Larson, 1949), are more able to name outstanding persons and are in higher agreement about such persons (Coleman, 1961), and experience more interpersonal transactions and greetings (Wright, 1961).

The Reported Experiences of Persons. Persons in small units receive more "satisfaction" (Katz, 1949; Tallachi, 1960), they speak more often of participation having been valuable and useful (Anderson, Ladd, and Smith, 1954), they are more satisfied with payment schemes (Campbell, 1952) and with results of discussion (Hare, 1952), and they find their work more meaningful



(Worthy, 1950). In explaining their results, a number of authors postulate a negative relation between size and attraction and see behavioral data as indicators of attraction, e.g., in terms of attraction toward the work situation (Baumgartel and Sobol, 1959; Cleland, 1955), interpersonal attraction due to better communication (Indik, 1961), morale and attraction (Hewitt and Parfit, 1953; Worthy, 1950), and forces toward the direct, consumatory use of behavior settings (Barker, 1960; Barker and Barker, 1961a).

#### Summary and Implications

The studies which used contrived laboratory groups surely differ in as yet undefined ways from ecological behavior settings, e.g., in "time perspective" (Kounin, 1961). However, their indication of a negative correlation between size and participation and involvement of individuals represents a tantalizing agreement with the theory of the present studies. The field studies that did not make use of rigorously defined ecological units provide further general support for the hypotheses guiding our studies. The field studies using behavior settings yield negative correlations between size and individual involvement, as predicted.

In summary, all of the studies we have discovered are in general agreement with the theory. The investigations reported in this volume advance research upon the relationship between size of ecological unit and individual behavior by placing it within a more explicit conceptual framework, by defining ecological units more precisely, and by including a greater range of behavior attributes, both overt and subjective.

## CHAPTER 4

### Some Structural Characteristics of High Schools Differing in Size

Roger G. Barker and Louise Shedd Barker

This chapter has two purposes: first, to identify the schools in which the main studies were done; second, to define and explore in a preliminary way some characteristics of schools which enter the other studies as major variables. In particular, this chapter will describe the relationship between school size (enrollment) and the other environmental variables of differentiation, population density, and scope and specialization of school offerings.

#### The Schools

Eastern Kansas is an area of mixed farming, cattle raising, and wheat farming. The economy of the towns and cities is based mainly, upon trade with farmers, light manufacturing, government agencies, educational and medical facilities, and military installations.

The region has a great variety of public high schools: central city high schools, suburban high schools, county high schools, town high schools, rural high schools. The high schools of eastern Kansas range in size from 18 to 2287 students. We selected thirteen of these high schools for intensive studies, and 39 for special, limited investigations. Population data for the 13 schools and their communities are reported in Table 4.1. The school enrollment is that reported by the State Department of Education on September 15, 1958; the community population is for January 1, 1959. During the three years these studies were underway, school and community populations fluctuated, but there were no marked changes. Population data at the time of particular studies,

Table 4.1 Population data for the  
thirteen schools and communities

| <u>School</u>         | <u>School<br/>enrollment<br/>Sept. 15, 1958</u> | <u>Population of<br/>community<br/>Jan. 1, 1959</u> |
|-----------------------|-------------------------------------------------|-----------------------------------------------------|
| Otân                  | 35                                              | 199                                                 |
| Dorset                | 45                                              | 169                                                 |
| Walker                | 83                                              | 450                                                 |
| Malden                | 92                                              | 507                                                 |
| Meadow <sup>a</sup>   | 113                                             | ---                                                 |
| Midwest               | 117                                             | 781                                                 |
| Vernon                | 151                                             | 1,150                                               |
| Haven                 | 221                                             | 2,907                                               |
| Eakins <sup>b</sup>   | 339                                             | 551                                                 |
| Booth                 | 438                                             | 3,004                                               |
| University City       | 945                                             | 23,296                                              |
| Shereton <sup>b</sup> | 1,923                                           | 4,769                                               |
| Capital City          | 2,287                                           | 101,155                                             |

<sup>a</sup> Meadow was two miles from the nearest town; it served four towns.

<sup>b</sup> High schools which served several communities in addition to the one in which the school was located.

are reported in connection with them. Brief descriptions of the 13 schools and communities follow.

Otan and Dorset: the smallest high schools with enrollments of 35 and 45, respectively. These schools served towns with 199 and 169 residents, together with the farm families in the surrounding rural areas. Otan appeared to be a declining town, partly because its existence was threatened by a proposed dam, and some students who would normally have attended Otan went to high schools in Vernon or Midwest, neighboring towns. Dorset showed no signs of decay.

Walker, Malden, Midwest, and Vernon: schools in the next larger size range with enrollments of 83 to 151 students. These schools constituted the small school base for the main studies to be reported. They were all located in Midwest County, an exclusively rural county. Their communities were vigorous business, school, church, and social centers. The maximum distance between the towns was 19 miles. They were approximately 30, 25, 40, and 50 miles from cities of 100,000, 25,000, 30,000, and 800,000 population. The county and the town of Midwest (the county seat) have been described in some detail in Barker and Wright (1955) and Barker and Barker (1960). Additional data are reported for these schools and towns in Table 4.2.

Table 4.2 Population data for four small Kansas towns and high schools

|         | <u>Town residents</u> | <u>Rural area residents</u> | <u>High school enrollment Number</u> | <u>Per cent rural</u> |
|---------|-----------------------|-----------------------------|--------------------------------------|-----------------------|
| Walker  | 450                   | 691                         | 83                                   | 48                    |
| Malden  | 507                   | 708                         | 92                                   | 53                    |
| Midwest | 781                   | 807                         | 117                                  | 59                    |
| Vernon  | 1150                  | 891                         | 151                                  | 49                    |

Walker, Malden, and Vernon had each passed bond issues and built new elementary school buildings within the previous three years; Midwest had built



a new elementary and high school building. Walker, the smallest of the Midwest County communities, was the site of the County Hospital and of two large nursing homes. Malden was the headquarters for the regional cooperative electrical distribution system, and the town was unusually well supplied with churches; there were four in the town. Midwest, as the county seat, had a higher concentration of law offices, government offices, and countywide meetings than the other towns. Vernon, the largest of the towns, had the greatest number of business establishments; it was the locus of the County 4-H Fair grounds, and was the only one of the four Midwest County towns on a railroad. The elementary education of Vernon was divided between the public school and a Catholic parochial school, the only nonpublic school in the four towns.

Meadow: a district (consolidated) school of 113 students. Meadow had been organized two years before our study to replace four town schools of about the size of Otan's. The school building was situated in the country, two to eight miles from the four towns it served.

Haven: a high school of 221 students located in a city of 3000 population. Students were drawn almost entirely from the town which was a county seat, and had some small industry. The Haven High School building housed the seventh and eighth grades as well as the high school, but they constituted a separate administrative and functional unit.

Eakins: a district school of 339 pupils. Eakins served a large area of farms, and of small towns of 100 to 500 population. Most of its students were transported by bus, some a distance of 25 miles. Eakins was one of the oldest consolidated schools in Kansas.

Booth: a school of 438 students situated in a town of just over 3000 population. Students were drawn from the town and the neighboring countryside.

University City: a school of 945 students housed in a new building. The city was the home of the state university, and it had some light manufacturing

industry. It was a county seat. The population, not counting the university, was about 25,000.

Shereton: suburban high school of 1923 students located on the border of a metropolitan area of 800,000 population. Shereton drew its students from a number of rapidly growing, middle and upper class residential towns.

Capital City: a school of 2287 students serving an entire city of 100,000. There were several junior high schools and one Catholic parochial high school in the city. The year following the study a second public high school was opened in Capital City. For purposes of this study, however, it was fortunate that the high school in Capital City was a community school as were the high schools in most of the small towns. Capital City High School had an enviable reputation; it had won a number of national awards which indicated that it was widely regarded as representing the best in American public, secondary education. Capital City High School was the large school anchor for the principal studies.

Some further details about the schools are given in connection with the particular studies.

For our purposes, the essential features of the schools were (a) they all conformed to the standards of the same educational authority (The State of Kansas); (b) they all conformed to the mores of the same culture (eastern Kansas); (c) nine of the 13 schools served the total high school population of single communities; (d) they varied greatly in enrollment, namely, from 35 to 2287 (see Table 4.1). These facts meant that we were able to investigate the relation between size of school and other institutional characteristics across a number of schools that were otherwise remarkably similar.

#### The Parts of a School

Considerable research has been done on the relation of size of institutions, including schools, to such structural features as the administrative

hierarchy and channels of communication (Terrien and Mills, 1955; Tallachi, 1960; Indik, 1961; Cleland, 1955). Valuable as such studies may be, they do not investigate the aspects of school which have direct impact upon students. Students have immediate and continuous contact with parts of the school; they live in English classes, libraries, and football games, not in administrative hierarchies or communication channels. Our aim has been to study the parts of schools of different sizes, and to study the properties of those parts.

So the first question we must answer is: What are the parts of a school? Perhaps the answer that most readily comes to mind is: School classes. But there are difficulties with classes as school units for the problems with which we are concerned. In the first place the classes are only one kind of school unit, or part. We are interested in every part of a school which children inhabit. Children do not live their school lives only in the classes they attend; they live, also, in the halls, in the assemblies, in the principal's office, in the vocal trio, in the shower room. But how are these to be dealt with in conjunction with classes? Are they equivalent to classes? Do Mr. X's algebra classes in room 7 = the graduation procession = the senior dance = the counselor's office = the semester examination period = the school lunch room = the student council meeting = the marching band practice? The problem of equivalence arises in connection with classes, too. Are Typing I and Typing II one class or two? They are listed separately in the schedule, but they meet at the same time in the same room with the same teacher. What about Physics which meets for book work and recitation in classroom 3 on Tuesday and Thursday, and meets for laboratory work in room 9 on Monday, Wednesday, and Friday? Is this one class or two?

Other complications will occur to the reader. Institutional units which are equivalent in a fundamental sense within schools, between schools, and between schools and communities are essential if we are ever able to have a comparative



science of schools, and of schools and communities. Classes are not adequate for this purpose.

What are the parts of a school? In addition to classes, answers have been given in terms of space, equipment, education of faculty, window area, curricula, and budgets. These approaches provide information about important problems, but they do not describe a school as it functions vis-a-vis its pupils; they are akin to describing a house in terms of the properties of the boards, bricks, pipes, and nails of which it is made. Schools and houses, as places where living and learning occur, are not revealed by procedures that dismantle them.

At this point the reader may wish to review the discussion of behavior settings (Chapter 2), for these are the school units in terms of which we shall analyze schools. Behavior settings have these values for our purposes: (a) they occur within the same spacial-temporal manifold as the school itself; (b) they are parts of the school, they are within it; (c) they are natural (i.e., experimenter-free) parts of the school; (d) they occur on a level of inclusiveness immediately below the school; no other part of the same or greater degree of unity separates a behavior setting and the school; (e) they occur upon a level of inclusiveness immediately above the persons who inhabit the school, behavior settings intervene between pupils and teachers and the school itself; (f) all behavior settings have the same degree of internal interdependence as measured by the K-21 rating, they have the same unity; (g) they have fundamental, common characteristics, they belong to the same class of phenomena wherever they occur (Barker and Wright, 1955; Barker, 1960); (h) behavior settings vary in the degree to which they possess various properties, it is via the variable properties of behavior settings that the school exerts its influence upon pupils and teachers; (i) it is, also, by way of their variable properties that classes of behavior settings with defined degrees of similarity can be identified.



Examples of behavior settings have already been given, and others will be presented later. The relationship between behavior settings and school classes will be considered here. The K-21 cutting point which we have used for determining the limits of a behavior setting solve univocally the problems raised above in the following ways: Mr. X's algebra classes = the senior dance = the counselors' office = the school lunch room = the student council meeting. These settings are "equal" in the sense that each has that minimum degree of internal unity and external independence which meets the K-21 criteria.

However, Mr. X's algebra classes  $\neq$  the graduation procession  $\neq$  semester examination period. Application of the K-21 method reveals that the graduation procession is a part, a cytosetting, of the behavior setting, graduation exercises. The semester examination period is not equal to Mr. X's algebra classes because it represents a number of parts of other settings; these parts are not independent from the classes for which they are terminal events. Analysis of the operations of Typing I and Typing II reveals common factors (leadership, time, space, etc.) to a degree which makes them parts of one setting. Finally the physics class and the physics laboratory, primarily because they engage the same teacher and students, also constitute parts of a single setting.

Objections can be made to almost every "decision" of the K-21 behavior setting criterion on grounds which change from one instance to another. But one strength of the K-21 basis for identifying behavior settings is that the grounds for discrimination are held constant; the same criteria are always employed and hence the same phenomena are identified in each case. Criteria for discrimination include interdependence variables in order to assure identification of parts with the same degree of unity. Decisions based on the K-21 analysis become univocal and, within the rating reliability, objective.

Inasmuch as the limits of a behavior setting are determined by the degree of commonality of its subparts with respect to leadership (teachers), members

(pupils), space, time, molar actions, behavior mechanisms, and behavior objects, various combinations of school classes actually constitute K-21 behavior settings. But, in general, all classes in one subject matter area taught by one teacher in one room constitute a single setting. Such a combination of classes is the most common school behavior setting.

#### Behavior Setting Surveys

The primary data of this study were complete catalogues of all the K-21 behavior settings occurring in each school for the school year 1959-1960. Each catalogue, or behavior setting survey, was arranged by behavior setting variety (cf. p. 32 ). The complete behavior setting survey of one school is given in Appendix 4.1.

Behavior setting surveys of the schools were made according to the directions given by Barker and Wright (1955, pp. 491-495). The general task in such a survey is that of identifying all of the supra-individual place-time-behavior units of a given degree of independence and internal unity. Field work problems are easier for a school than for a community inasmuch as the school building, the class schedule, the table of school organization, written information and directions for students, the school paper, and the school yearbook provide much of the essential information. Of great help to the field work in the present case was the complete, and thoroughly rechecked, behavior setting survey of one of the schools, Midwest, which was available to us at the beginning of the study. Since all the schools were basically similar, this survey served as a useful guide; it was like having an anatomical dissection chart of one specimen of a species to guide the dissection of other specimens. After the basic structure of a school was laid out on the basis of the source material mentioned above, a relatively small amount of field observation and interviewing of staff and students served to complete the survey.

### The Relation between School Population and School Differentiation

Data on the population and the differentiation of the schools are reported in Table 4.3 and Figure 4.1. Differentiation (D) refers to the number of parts or behavior settings which a school contains for a given period of time, usually one year. Population refers to number of students enrolled. The data show that across the high schools, when they are ordered by population, differentiation increased more slowly than population. The smallest school had 1.5 per cent of the population and 14 per cent of the differentiation of the largest school. The smallest schools had fewer students than parts and the largest had over four times as many students as parts. The actual ratios of students to settings (P/D) are given in Table 4.3. P/D ratios are the average number of students per setting within individual schools; they are equivalent to the average population density, as this is used by demographers. The P/D ratio ranged from 0.58 for the smallest school to 4.58 for the largest school.

The P/D ratios tell nothing about the actual numbers of inhabitants in the behavior settings of schools, since inhabitants are not fixed to settings; every pupil inhabits a number of settings. To investigate the actual populations, we secured data for a sample of students in a sample of the settings of seven schools. In Table 4.4 we report the mean and the median number of Junior Class students inhabiting the extracurricular behavior settings of these schools. These data refer only to those behavior settings inhabited by one or more Junior Class students. In this sample of schools, the settings of the small schools, with low P/D ratios, had fewer Junior student inhabitants than the settings of the large schools, with high P/D ratios.

Our first findings may be summarized as follows: (a) the large schools had more parts than the small schools, but (b) the greater number of parts of the large school was not proportional to their greater number of students, so that (c) large



Table 4.3 Number of students (population),  
number of behavior settings (differentiation),  
and number of varieties of behavior settings  
in 13 Kansas schools

| <u>School</u>   | <u>Population (P)</u> | <u>Differentiation (D)</u> | <u>P/D</u> | <u>Varieties</u> |
|-----------------|-----------------------|----------------------------|------------|------------------|
| Otan            | 35                    | 60                         | 0.58       | 29               |
| Dorset          | 45                    | 58                         | 0.78       | 28               |
| Walker          | 83                    | 96                         | 0.86       | 31               |
| Malden          | 92                    | 78                         | 1.18       | 33               |
| Meadow          | 113                   | 94                         | 1.20       | 32               |
| Midwest         | 117                   | 107                        | 1.09       | 33               |
| Vernon          | 151                   | 98                         | 1.54       | 29               |
| Haven           | 221                   | 154                        | 1.44       | 36               |
| Eakins          | 339                   | 139                        | 2.44       | 34               |
| Booth           | 438                   | 218                        | 2.01       | 39               |
| University City | 945                   | 312                        | 3.03       | 36               |
| Shereton        | 1923                  | 487                        | 3.95       | 41               |
| Capital City    | 2287                  | 499                        | 4.58       | 43               |



Number of students, behavior settings, and varieties of behavior settings, in hundreds

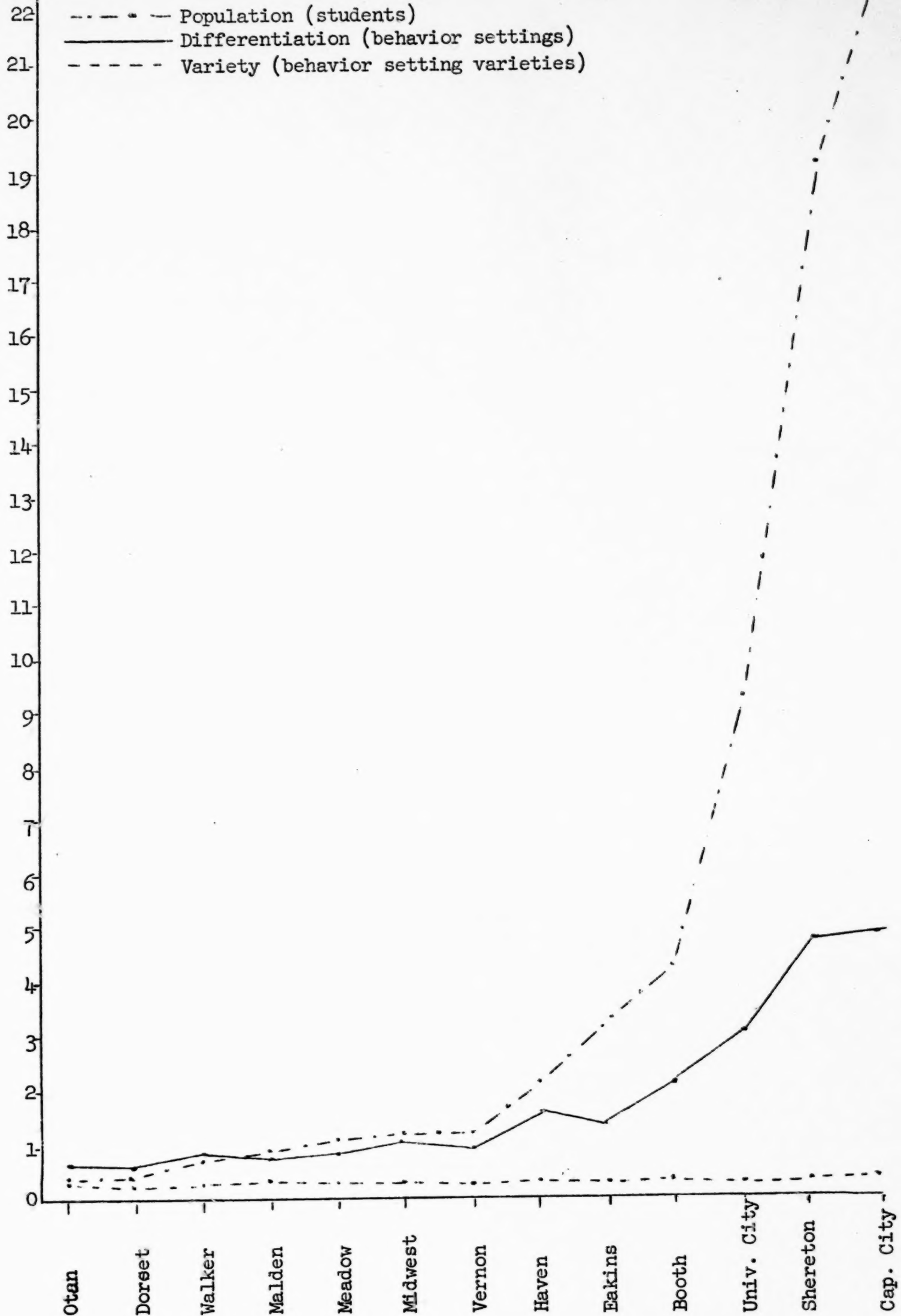


Figure 4.1 Population (number of students), differentiation (number of behavior settings), and variety (number of behavior setting varieties) of 13 schools.

Table 4.4 Mean and median number of Junior student inhabitants of extracurricular behavior settings for schools of different sizes and P/D ratios

| <u>School</u> | <u>P/D Ratio</u> | <u>Number of Junior Students</u> | <u>Number of Junior Students in Behavior Settings</u> |               |
|---------------|------------------|----------------------------------|-------------------------------------------------------|---------------|
|               |                  |                                  | <u>Mean</u>                                           | <u>Median</u> |
| Walker        | 0.86             | 16                               | 10.6                                                  | 11.8          |
| Malden        | 1.18             | 18                               | 11.5                                                  | 13.7          |
| Midwest       | 1.09             | 22                               | 11.0                                                  | 10.4          |
| Vernon        | 1.54             | 36                               | 17.0                                                  | 13.0          |
| Haven         | 1.44             | 50                               | 23.1                                                  | 20.9          |
| Eakins        | 2.44             | 86                               | 34.9                                                  | 30.0          |
| Capital City  | 4.58             | 714                              | 105.5                                                 | 37.0          |

schools had greater average density of students per setting (P/D ratio) than small schools, and (d) they had a greater average number of student inhabitants per setting.

According to behavior setting theory, the population of a behavior setting and the P/D ratio of an institution are important aspects of the environments which settings and institutions provide their inhabitants (cf. Chap. 2). Our data establish the fact that in the schools we have studied these variables are positively related to school size. In the research presented in the other chapters of this report, some derivations from behavior setting theory are tested in schools of various sizes, using the P/D ratio as the independent variable. The present data demonstrate that within these schools, P/D is an index of the relative population of the behavior settings of schools.

#### Relation between School Size and Number of Behavior Setting Varieties

Schools have so far been described in terms of numbers of parts or settings; it is also possible to portray schools in terms of the range of differences

represented in their array of settings. One index of this range is that of variety. Variety reflects differences in kind while differentiation refers to the independence of units. Mr. X's algebra classes and Mr. Y's trigonometry classes are two independent settings of one variety. Mr. X's algebra classes and the Homecoming Assembly are settings from two different varieties. The richness of the schools' offerings, as measured by the number and kind of varieties present, is our next concern.

The data of Table 4.3 and Figure 4.1 show that there were more varieties of behavior settings in the larger than in the smaller schools, but that the increment was less for varieties than for settings, and much less for varieties than for school population. In other words, the schools differed more with respect to number of students than with respect to number of settings, and more with respect to number of settings than with respect to number of behavior setting varieties. When we compare the largest school to the smallest, we find that it contained 65 times as many students, eight times as many settings but only 1.5 times as many varieties.

We turn next to a consideration of the nature of the behavior setting varieties in the small and large schools.

#### Varieties of Behavior Settings Common to Schools of Different Sizes

Forty-two different varieties of settings were present in the 13 schools, and of these 19, i.e., 44 per cent, occurred in all schools. Setting varieties found in every school might be thought of as the basic, or common denominator settings. Within the portion of society studied, such kinds of settings were probably essential if a school was to be a school. These common denominator varieties are listed below. The numbers are the variety numbers; the letters in parentheses refer to variety groupings (see p. 57).

1. Athletic Contests, Indoors (A)
2. Athletic Contests, Outdoors (A)
20. Educational Groups, Academic (E)
22. Educational Groups, Home Economics (E)
24. Educational Groups, Physical Education (E)
25. Educational Groups, Shop and Agriculture (E)
29. Fire and Other Safety Drills (O)
39. Government and School Offices (O)
41. Hallways and Coatrooms (O)
52. Libraries (E)
54. Meetings, Executive (Ex)
55. Meetings, Organization Business (Ex)
64. Open Spaces (Ex)
65. Outings (Ex)
70. Plays, Concerts, and Programs (Ex)
76. Recognition Programs (Ex)
80. Restaurants, School Lunch Room (O)
81. Restrooms (O)
83. School Coaches' Rooms (O)

The common behavior setting varieties encompassed 65 per cent of the 2300 behavior settings in the 13 schools; the number and per cent of settings within the common varieties are shown for each school in Table 4.5.

Table 4.5 Behavior settings within varieties common to all schools

|                 | Number<br>of BS | Per cent of<br>School's BS |
|-----------------|-----------------|----------------------------|
| Otan            | 48              | 80                         |
| Dorset          | 47              | 81                         |
| Walker          | 67              | 70                         |
| Malden          | 55              | 71                         |
| Meadow          | 67              | 70                         |
| Midwest         | 77              | 72                         |
| Vernon          | 82              | 84                         |
| Haven           | 125             | 81                         |
| Eakins          | 109             | 78                         |
| Booth           | 123             | 56                         |
| University City | 206             | 66                         |
| Shereton        | 247             | 51                         |
| Capital City    | 233             | 47                         |



It is clear that the per cent of behavior settings in common varieties decreased with school size. Conversely, the proportion of school settings beyond the common denominator group rose as school size increased. Nevertheless the degree of similarity of the schools with respect to varieties of behavior settings was much greater than their similarity with respect to population and differentiation. Within schools that differed in population by a factor of 65 and that differed in differentiation by a factor of 8, 44 per cent of the varieties were common to all schools and 47 per cent or more of the behavior settings of every school were in common varieties. If one compares individual large and small schools, the degree of commonality is even greater. Seventy-seven per cent of the behavior setting varieties present in Midwest High School (enrollment 117) and Capital City (enrollment 2,287) were common to both schools; all of Midwest High School's settings and 80 per cent of Capital City High School's were common varieties.

Five varieties of behavior settings were absent from schools with fewer than 329 students, namely:

- Educational Groups, Art (E)
- Educational Groups, Swimming (E)
- Doctors' Offices and Clinics (O)
- Home Rooms (O)
- Elections (Ex)

Driver Education did not occur in schools with fewer than 92 students, and Dances and Educational Groups, Music, did not occur in the smallest school, with 35 students.

Two of the behavior setting varieties were absent from the small schools for functional reasons. Elections did not occur in the small schools; nevertheless, student officers were elected in all schools. In the small schools the election of officers occurred within other, less specialized varieties of settings such as Meetings, Organization Business (e.g., Junior Class Meeting) and Plays, Concerts, and Programs (e.g., All School Assembly). This is an

example of the emergence in large schools of specialized varieties of settings from the less specialized settings of the small schools. The variety Home Rooms in the larger schools is another example of the same process of specialization. Lack of material resources was undoubtedly an important factor in the absence of Driver Education and Swimming from small schools, and insufficient manpower was involved in the absence of Art Classes and Doctors' Offices and Clinics from the small schools.

There were fourteen other behavior setting varieties which were missing from some of the schools. The absence of these varieties was not clearly related to school size; they were absent from a single school only, or from schools of various sizes; the omissions appeared to be due to local, often temporary causes.

In summary, there were three varieties of behavior settings whose essential features were not available to the students of the small schools, namely: swimming classes, medical examinations and service,<sup>1</sup> and art classes (i.e., painting, sculpture, and crafts; music and drama were present in all schools). No variety of setting was regularly absent from the large schools.

#### Number of Behavior Settings in Different Classifications

It is of interest to know the extent to which schools of various sizes emphasized certain aspects of the environments they provided their students. One measure of emphasis is the proportion of a school's settings having designated characteristics. For example, do larger or smaller schools devote a greater proportion of their settings to extracurricular affairs? To investigate such questions we have grouped behavior setting varieties into four classes: (E) educational behavior settings (all varieties of behavior settings which consisted of formal classes, with a teacher and pupils);

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<sup>1</sup>Medical examinations for athletic participation occurred in the local doctors' offices.

(A) athletic behavior settings (athletic games and contests); (O) operating behavior settings (settings which maintained the school); (Ex) extracurricular settings (all other settings). The grouping of the different varieties is indicated in the lists by the symbols E, A, O, Ex. The number of settings in each of these variety groupings is presented in Table 4.6.

A coefficient of concordance (Kendall, 1948) indicates that there was agreement among the schools in rank order of number of behavior settings in the four variety classes ( $p < .001$ ). In general the relative order of frequency within schools was: Extracurricular, Educational, Athletic, Operating. However, inspection of the rank order matrix showed considerable deviation from this order within the larger schools. In the three largest schools the order was Extracurricular, Operating, Educational, and Athletic. A chi square test of obtained vs. expected frequencies involving all the data of Table 4.6 indicates that the schools were heterogeneous with respect to actual frequency of settings within the variety groupings ( $p < .005$ ).

Analyses of each variety grouping separately across schools revealed that the frequency of settings varied more than would be expected in the case of Operating varieties ( $p < .001$ ) and Extracurricular varieties ( $p < .02$ ). Inspection of Table 4.6 shows that in the largest schools a greater proportion of all behavior settings fell in the operating category. This finding is in accord with findings of industrial research which indicate that specialized administrative and control personnel increase more rapidly than total personnel (Terrien & Mills, 1955; Haire, 1955). No pattern in the relation of school size to per cent of extracurricular settings was apparent.

In summary, large and small schools were similar in their concentration of settings in the four areas. However, there was a significant trend for large schools to emphasize operating settings more than small schools.

Table 4.6 Number (and per cent) of behavior settings within each school which fell into four variety groupings .

| <u>School</u>   | <u>Variety Grouping</u> |                 |                  |                        | <u>Total</u> |
|-----------------|-------------------------|-----------------|------------------|------------------------|--------------|
|                 | <u>Educational</u>      | <u>Athletic</u> | <u>Operating</u> | <u>Extracurricular</u> |              |
| Otan            | 12 (20)                 | 10 (17)         | 11 (18)          | 27 (45)                | 60           |
| Dorset          | 15 (26)                 | 12 (21)         | 6 (10)           | 25 (43)                | 58           |
| Walker          | 17 (18)                 | 13 (14)         | 11 (12)          | 55 (57)                | 96           |
| Malden          | 14 (18)                 | 13 (17)         | 8 (10)           | 43 (55)                | 78           |
| Meadow          | 20 (21)                 | 15 (16)         | 11 (12)          | 48 (51)                | 94           |
| Midwest         | 18 (17)                 | 15 (14)         | 13 (12)          | 61 (57)                | 107          |
| Vernon          | 18 (18)                 | 17 (17)         | 8 (8)            | 55 (56)                | 98           |
| Haven           | 27 (18)                 | 20 (13)         | 14 (9)           | 93 (60)                | 154          |
| Eakins          | 40 (29)                 | 18 (13)         | 14 (10)          | 67 (48)                | 139          |
| Booth           | 39 (18)                 | 22 (10)         | 32 (15)          | 125 (57)               | 218          |
| University City | 56 (18)                 | 53 (17)         | 57 (18)          | 146 (47)               | 312          |
| Shereton        | 88 (18)                 | 54 (11)         | 101 (21)         | 244 (50)*              | 487          |
| Capital City    | 108 (22)                | 50 (10)         | 114 (23)         | 227 (46)               | 499          |



Relation between School Size and  
Scope of Athletic Behavior Settings

In the analyses above, behavior settings were grouped into broader categories than varieties. They can also be placed in narrower classes than varieties. Within any of the varieties we have identified there are sub-varieties of behavior settings with greater intersetting similarity than within varieties. We have called these equivalence groups, or kinds of settings. The standing behavior patterns and the material supports of settings within the same equivalence groups can be exchanged between the settings with little disturbance; e.g., the setting Football Game, A Team, and the setting Football Game, Freshmen are highly congruent and could be easily transposed.

A measure of the breadth or scope of behavior settings in a variety is the number of behavior setting equivalence groups it contains, i.e., the number of different kinds of behavior settings it encompasses. Thus, the behavior setting variety Athletic Contests, Indoors, in the town of Otan had two behavior setting equivalence groups: (a) Basketball Games (four settings) and Gym for Free Play (one setting). The scope of this variety in Otan was, therefore, 2. Haven High School had the same two behavior setting equivalence groups, and also a third, Wrestling, making a scope score of 3.

We have studied the scope of Athletic Contests, both Indoors and Outdoors, across the 13 schools. In the 13 schools, there were 19 different behavior setting equivalence groups within the varieties Athletic Contests, Indoors and Outdoors, as follows (each equivalence group included contests, games, and practices, if the latter occurred):

|              |                     |
|--------------|---------------------|
| Basketball   | Aerial darts        |
| Wrestling    | Football            |
| Handball     | Touch football      |
| Bowling      | Tennis              |
| Volleyball   | Golf                |
| Table tennis | Baseball            |
| Badminton    | Hockey              |
| Trampoline   | Free gym activities |
| Track        | Swimming            |
| Gymnastics   |                     |

The total (summed) scope scores for the two varieties of Athletic Contests are reported for each town in Table 4.7. In this table, also, the number of athletic behavior settings is presented, and the scope score is given as a per cent of the possible maximum scope, i.e., 19.

Table 4.7 Number of behavior settings and number of kinds of behavior settings (scope) in the varieties Athletic Contests, Indoors and Outdoors; in order of school enrollment

|                 | <u>Number of Settings<br/>within Variety</u> | <u>Scope</u> | <u>Per Cent of<br/>Maximum Scope</u> |
|-----------------|----------------------------------------------|--------------|--------------------------------------|
| Otan            | 10                                           | 4            | 21                                   |
| Dorset          | 12                                           | 4            | 21                                   |
| Walker          | 13                                           | 3            | 16                                   |
| Malden          | 13                                           | 4            | 21                                   |
| Meadow          | 15                                           | 4            | 21                                   |
| Midwest         | 15                                           | 5            | 27                                   |
| Vernon          | 16                                           | 5            | 27                                   |
| Haven           | 20                                           | 6            | 32                                   |
| Eakins          | 18                                           | 4            | 21                                   |
| Booth           | 22                                           | 7            | 37                                   |
| University City | 53                                           | 13           | 69                                   |
| Shereton        | 48                                           | 12           | 64                                   |
| Capital City    | 49                                           | 15           | 80                                   |

These data show that the number of kinds of athletic behavior settings, i.e., the scope of athletic activities, increased by a factor of about four, from four in the smallest school to 15 in the largest. At the same time, the total number of athletic behavior settings increased by a factor of about 5, from 10 to 49.

The relation of scope scores to size presents a different picture of the relative richness of large and small school offerings than does the relation of variety to size. It will be recalled that variety from smallest to largest school increased by a factor of only 1.5. These data on scope within athletic varieties would indicate that the richness advantage of a large school is one of heterogeneity within varieties rather than the more diverse richness of many varieties.

Thirteen of the 19 kinds of athletic behavior settings did not occur in schools with 151 or fewer students, namely:

|              |              |
|--------------|--------------|
| Wrestling    | Gymnastics   |
| Handball     | Aerial darts |
| Bowling      | Tennis       |
| Volleyball   | Golf         |
| Table tennis | Hockey       |
| Badminton    | Swimming     |
| Trampoline   |              |

The data concerning school size, and number and scope of athletic behavior settings are presented graphically in Figure 4.2. Here all data for each school are presented as proportions (per cents) of the data for the largest school. These data make it dramatically clear that the schools did not differ so much in terms of number and kinds of athletic behavior settings as in terms of number of pupils. The number and the kinds of athletic behavior settings varied to approximately the same degree.

#### Relation between School Size and Scope of Academic Behavior Settings

Athletic behavior settings do not usually contain subparts, or cyto-settings, with sufficient completeness to allow them, under any circumstances, to be differentiated as separate, independent settings. The audience of a basketball game without the game is not a viable unit. This is not true of some other cyto-settings. The pharmacy and the fountain of a drug store have enough

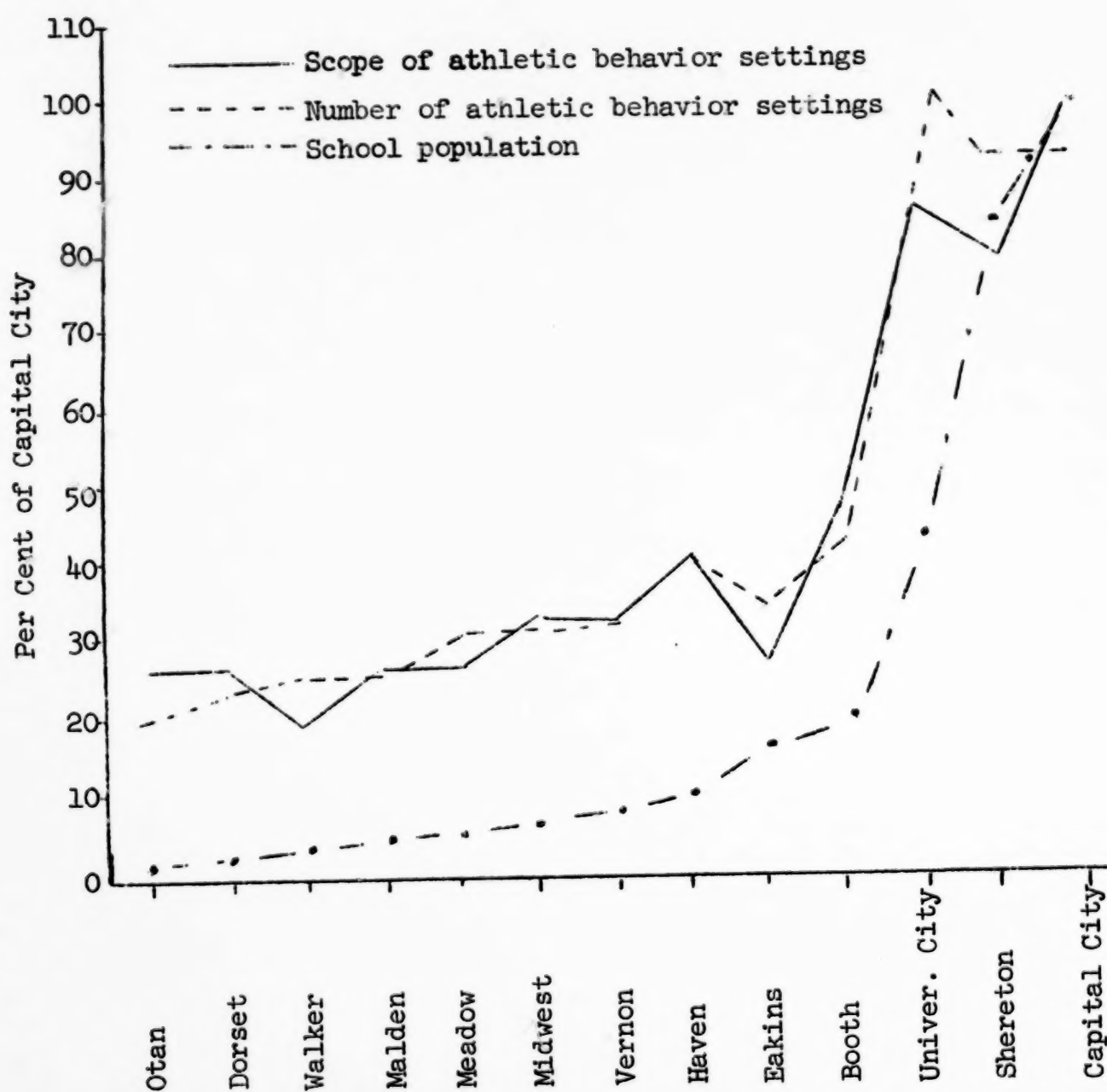


Figure 4.2 School population, and number and scope of athletic behavior settings expressed as per cent of the data for the largest school



completeness in themselves to survive as independent settings under the proper circumstances. This is true, too, of some parts of a church worship service: the choir might sing alone, for its own satisfaction. There are many such cytosettings within the K-21 behavior settings of the variety Education Groups, Academic.

For example, Mrs. S's shorthand and bookkeeping classes meet at the same time and place under the same leadership; thus, they are parts of one behavior setting. Either class could exist alone, however, and each represents a different kind of curricular activity. A measure which counts these classes as separate and different would reflect a school's scope of academic offerings.

In order to study the scope of academic activities we identified all the cytosettings of the 13 schools that had the potentiality of independent existence; this was done on the basis of our general experience: any cytosetting we had known to exist in some school as a separate setting was so identified. After identifying these cytosettings within the 13 schools we placed them in equivalence groups, or kinds, exactly as we did with the athletic behavior settings. There were in the 13 schools 34 cytosetting equivalence groups within the variety Education Groups, Academic, as follows:

|                     |                  |
|---------------------|------------------|
| English             | General Biology  |
| Journalism          | Physiology       |
| Public Speaking     | Botany           |
|                     | Health           |
| General Mathematics |                  |
| Algebra             | Latin            |
| Geometry            | Spanish          |
| Trigonometry        | French           |
| Probability and     | German           |
| Statistics          |                  |
| American History    | General Business |
| American Government | Typing           |
| World History       | Shorthand        |
| Economics           | Bookkeeping      |
| Sociology           | Business Law     |
| Psychology          | Office Machines  |
| Occupations         | Retail Selling   |
| General Science     |                  |
| Chemistry           |                  |
| Physics             |                  |
| Geography           |                  |

The number of academic behavior settings, and their scope are reported in Table 4.8; scope is presented, too, as a per cent of the maximum possible scope, i.e., 34.

Table 4.8 Number of behavior settings and number of kinds of cytosettings (scope) for the variety Education Groups, Academic, in order of school enrollment

|                 | <u>Number of<br/>Settings in Variety</u> | <u>Scope</u> | <u>Per cent of<br/>Maximum Scope</u> |
|-----------------|------------------------------------------|--------------|--------------------------------------|
| Otan            | 8                                        | 13           | 38                                   |
| Dorset          | 5                                        | 12           | 35                                   |
| Walker          | 8                                        | 14           | 41                                   |
| Malden          | 5                                        | 12           | 35                                   |
| Meadow          | 10                                       | 15           | 44                                   |
| Midwest         | 8                                        | 13           | 38                                   |
| Vernon          | 7                                        | 14           | 41                                   |
| Haven           | 13                                       | 19           | 56                                   |
| Eakins          | 23                                       | 20           | 68                                   |
| Booth           | 21                                       | 23           | 68                                   |
| University City | 30                                       | 23           | 68                                   |
| Shereton        | 60                                       | 27           | 79                                   |
| Capital City    | 64                                       | 30           | 88                                   |

As with athletic contests, the scope of activities within the academic behavior settings changed with the size of the school, from 13 in the smallest school to 30 in the largest, i.e., by a factor of 2.3. At the same time the number of academic behavior settings changed from 8 to 64, i.e., by a factor of eight. These data are presented graphically in Figure 4.3 where all data for each school are presented as proportions (per cents) of the data for the largest school.

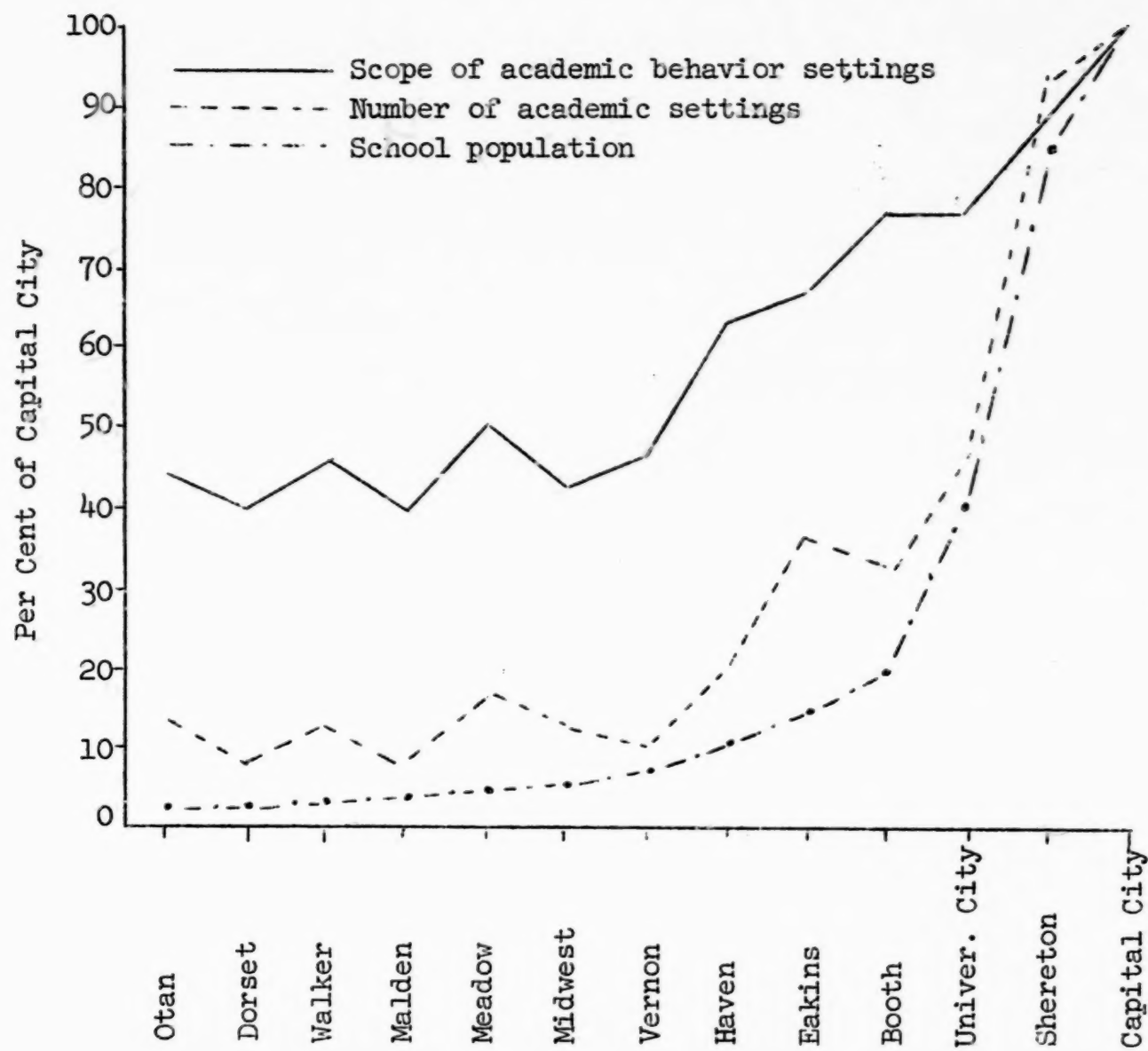


Figure 4.3 School population, and number and scope of academic cytosettings expressed as per cent of data for largest school.

The curves show that the small schools were not so small in terms of number and kinds of academic activities as they were in size, and that the scope of academic activities (scope) changed less with school size than did number of academic settings.

Ten of the 34 cytosetting equivalence groups were not represented in any school with fewer than 151 students, namely:

|                 |                |
|-----------------|----------------|
| Probability and | Geography      |
| Statistics      | Spanish        |
| Economics       | French         |
| Sociology       | German         |
| Psychology      | Retail Selling |

Five of the equivalence groups occurred within the larger schools as differentiated cytosettings, but they were present in less specialized forms in the smaller schools. These were:

|                 |                 |
|-----------------|-----------------|
| Journalism      | Business Law    |
| Public Speaking | Office Machines |
| Physiology      | Occupations     |

The remaining 19 equivalence groups of cytosettings were common to all schools.

The smaller schools were deficient, in comparison to the larger schools, with respect to specialized mathematics, specialized social and behavioral sciences, foreign languages, and specialized business classes.

#### Relation of School Size to other School Characteristics--a Summary

The data assembled indicate that as the schools increased in size, they increased in differentiation, but at a much slower rate. Accompanying the increase in number of settings was a corresponding increase in population density: the theoretical number of persons per setting, as represented by the P/D ratio, increased with size; the actual number of persons inhabiting settings also increased.

There is also evidence that increase in school size was accompanied by a change in the proportion of settings with certain functions. Specifically, the large schools invested a larger proportion of their settings in operating



processes. This finding indicates that the larger schools had a different shape as well as a greater mass.

The extent to which school size was related to the richness of offerings depended upon the measure of richness employed. The variety index, which reflects only major degrees of diversity among settings, showed relatively little richness difference between large and small schools. When heterogeneity within varieties was investigated, it was found that large schools provided about four times as many kinds of athletic settings and twice as many kinds of academic cytosettings as the smallest schools.

In general, the smaller schools managed to sustain a large proportion of the types of offerings provided by the larger schools.

#### The School Size Illusion

To an outside observer, a school with many students is impressive: its imposing physical dimensions, its seemingly endless halls and numberless rooms, its hundreds of microscopes, its vast auditorium and great audiences, its sweeping tides of students all carry the message of power, movement, vitality, purpose, achievement, certainty. In contrast, a small school with its commonplace building, its three microscopes, its dual-purpose gym-auditorium half-filled with students who assemble and depart, not in tides, but in a tangle of separate channels is not impressive. The members of the field-work team never ceased to marvel that the directly experienced differences between large and small schools were, in these respects, so compelling, like the differences between a towering mountain and an ordinary hill, between a mighty river and a meandering brook.

But to an inside participant the view is different. When the field workers were able to participate in the functioning behavior settings of schools, they saw the small schools as in some respects more coercive and dominating than the large schools, and the studies presented later in this report amply confirm

this impression. There is, indeed, an inside-outside perceptual paradox, a school size illusion.

The data on school structure which have been presented in this chapter lay the groundwork for the explanation of this illusion. We have discovered that small high schools are, in fact, not so small on the inside as they are on the outside. In terms of number of behavior settings, number of varieties of behavior settings, and number of inhabitants per setting, interior characteristics not easily seen from the outside, small schools differ less from large schools than in terms of number of students and amount of space, which are perceptually salient external attributes of schools. Here is one basis of the school size illusion. But, more importantly, these findings raise the question of which are the stronger variables so far as students are concerned, the inside ones or the outside ones, and how they operate upon students. These are the problems of the chapters which follow.

### School Size and Participation in Interschool

#### Events and Extracurricular Activities

Roger G. Barker and Eleanor Hall Mikesell

This chapter reports the results of our first reconnaissance of the problem of school size and student behavior. It makes use of data from the reports of government agencies, school organizations, and schools. The available data were fragmentary, but their meaning was clear within the narrow limits to which they applied, and they were decisive in convincing us that our theoretical analysis of the effects of school size upon the lives of high school students was promising. The more systematic investigations reported in the chapters which follow constitute replications and extensions of these first efforts using more adequate data and methods.

#### School Size and Participation in Interschool Events

The Kansas State High School Activities Association organizes and supervises a great number of interschool contests, exhibitions and festivals. In addition to sports events, regional and state competitions are held in the fields of drama, group and individual musical performance, and debating. The activities association also arranges conferences for school journalists and student government officers. It has, in addition, a program of interschool social and recreational activities.

The Kansas State High School Activities Association keeps careful records of the participation of each school in its programs, and in the case of the events concerned with drama, music, journalism, and student government the records include the number of individual participants from each school. We have used these records as measures of the extent of participation in the corresponding behavior settings of the member high schools.

Data were available from the activities association for 218 three- and four-year schools in eastern Kansas ranging in enrollment on September 15, 1958 from 18 to 2287, and totaling 38,172 students. In using these data, we have made no distinction between three- and four-year high schools. The 218 schools were divided into nine school size-classes, with a comparable number of students in each class. For each school size-class, the size range, the mean number of students per school, the total number of students, and the number of schools in the class are presented in Table 5.1.

Table 5.1 Number of students and number of schools in stated school size-classes

| <u>School Size-<br/>Class</u> | <u>School Size (number of students)<br/>Range</u> | <u>Mean</u> | <u>Number of<br/>Students</u> | <u>Number of<br/>Schools</u> |
|-------------------------------|---------------------------------------------------|-------------|-------------------------------|------------------------------|
| 1                             | 18-60                                             | 42          | 3139                          | 75                           |
| 2                             | 61-97                                             | 76          | 4420                          | 58                           |
| 3                             | 101-150                                           | 115         | 4370                          | 38                           |
| 4                             | 159-285                                           | 217         | 4334                          | 20                           |
| 5                             | 334-539                                           | 423         | 4226                          | 10                           |
| 6                             | 547-743                                           | 611         | 4277                          | 7                            |
| 7                             | 773-974                                           | 889         | 4443                          | 5                            |
| 8                             | 1346-1923                                         | 1541        | 4622                          | 3                            |
| 9                             | 2054-2287                                         | 2171        | 4341                          | 2                            |
|                               | All schools                                       |             | 38172                         | 218                          |

The number of students from each of the 218 schools who participated in 1959 in district competitions and conferences concerned with dramatics, group musical performance, individual musical performance, school journalism, and student government affairs are reported in Table 5.2.

The number of participating students per thousand enrolled in the schools of each size-class have been calculated from the data of Tables 5.1 and 5.2.



The resulting participation rates are plotted in Figure 5.1. The five participation curves have two features in common: (a) the number of participants per thousand students is smallest in the largest schools; (b) the number of participants per thousand is greatest in either the second or the third size-class (mean size 76 or 115); all the curves reach a peak in the smaller, but not in the smallest schools.

Table 5.2 Number of student participants in interschool events for different school size-classes

| School Size-<br>Class <sup>a</sup> | Dramatics | Journalism | Student<br>Government | Music      |       |
|------------------------------------|-----------|------------|-----------------------|------------|-------|
|                                    |           |            |                       | Individual | Group |
| 1                                  | 46        | 26         | 9                     | 121        | 647   |
| 2                                  | 126       | 8          | 48                    | 182        | 1616  |
| 3                                  | 117       | 113        | 113                   | 136        | 1345  |
| 4                                  | 100       | 36         | 51                    | 145        | 1346  |
| 5                                  | 48        | 40         | 42                    | 64         | 563   |
| 6                                  | 55        | 46         | 23                    | 62         | 299   |
| 7                                  | 45        | 63         | 52                    | 47         | 228   |
| 8                                  | 54        | 40         | 27                    | 70         | 619   |
| 9                                  | 20        | 31         | 8                     | 38         | 69    |

<sup>a</sup>See Table 5.1

The general similarity of the separate curves justifies combining them; this has been done by summing the number of participants across events (Table 5.2), and converting to number per thousand enrolled in the schools of each size-class (Table 5.1). It should be clearly understood that the combined participation curves do not report the number of different individuals who participated in district events, inasmuch as the same person could take part in more than one event; rather, the curves represent the number of district "participations" per thousand students. Two scales are provided for Figure 5.2: (a) participations

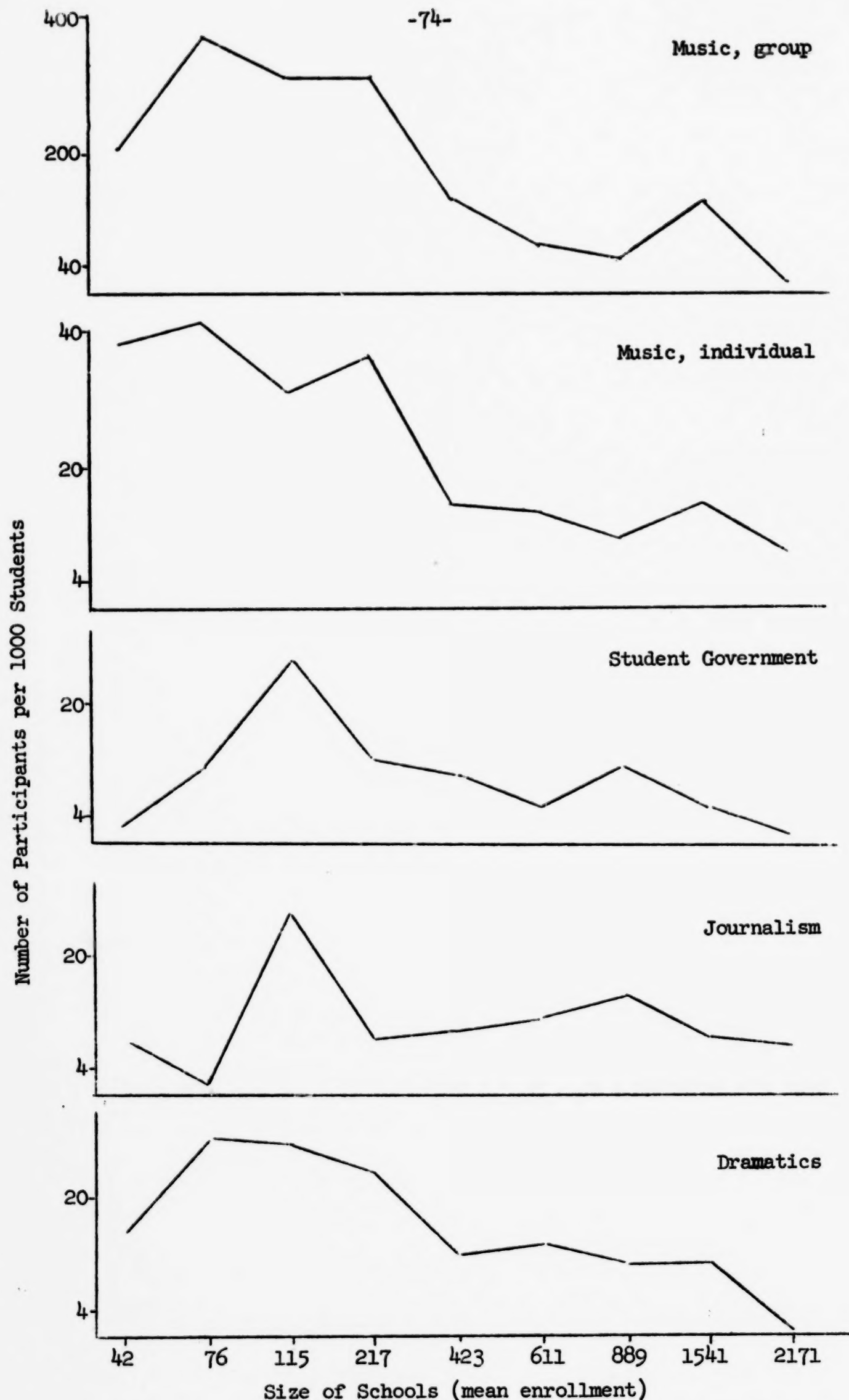


Figure 5.1 Participation by high school students in district meetings. Number of participants per thousand students enrolled in the schools of each size class.

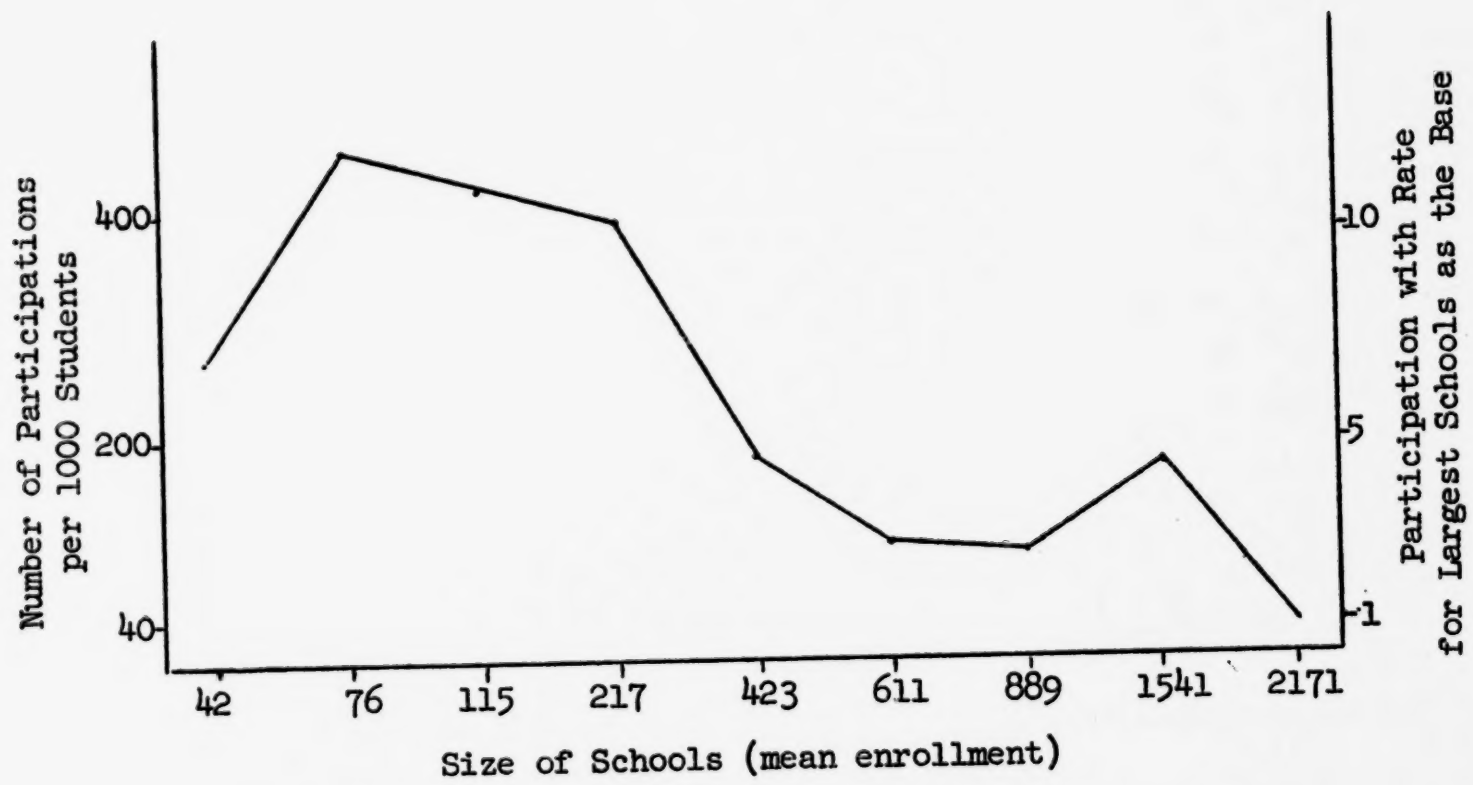


Figure 5.2 Participation of high school students in district meetings; combined data (see text)

per thousand students enrolled, and (b) participations per thousand expressed in terms of the rate for the largest class of schools, i.e.,

$$\frac{\text{rate for schools of class X}}{\text{rate for schools with largest enrollment.}}$$

Statistical tests have not been applied to the data of Table 5.2. We look upon the data for the different events as independent tests of participation, and the five curves, therefore, as replicative. Their essential similarity leads us to conclude that in the schools involved, participation in district music, dramatic, journalistic and student government events was more frequent in high schools within the 61-285 size range than in the smaller or the larger schools. If we take the data of Figure 5.2 as the most adequate, we find that participations in the five district events amounted to about 40 per cent (400 per 1000) of the enrollments within school size-classes 2, 3, and 4 (61-285 students), that there was a sharp drop from these levels to school size-class 5 (334-539 students), and that the schools in classes 2, 3, and 4 had over 10 times the rate of participation as the largest schools.

Although these findings are in line with the theories of school structure and behavior setting dynamics reported in Chapters 1 and 2 of this report they can only be considered as suggestive and worthy of further exploration; there are inadequacies in the data and uncontrolled variables in the research design.

One of the latter is the possible different significance of district inter-school events for schools of different sizes. Perhaps large school administrators and students do not value district meetings so highly as small school administrators and students; perhaps large schools aspire, rather, to state and national competitions. One bit of evidence on this issue is the number of schools that entered the district events. One might expect schools that devalued the district meetings to enter, as schools, with less frequency than schools that valued them. The data of Table 5.1 show that there were 116 schools in the size



classes 2, 3, and 4; there were therefore  $5 \times 116 = 580$  possible school entrances in the five events. In fact, there were 222 such entrances, i.e., 40 per cent of the possibilities. For the four largest school size-classes, there were 85 possible school entrances, and 57 actual entrances, i.e., 67 per cent of the possibilities. The large schools entered, as schools, in the district events even more widely than the small schools; this does not look like devaluation.

But rather than speculate about possible unknown factors we shall turn to another kind of public data.

#### School Size and Students' Reports of Extracurricular Activities

It is the custom in the high schools of eastern Kansas to publish in a school yearbook the pictures of the graduating Senior students and a list of the extracurricular activities of each Senior during his high school career. The activity data are supplied to the yearbook by each student. We were able to obtain yearbooks for 36 high schools; the data which follow were secured from these yearbooks.

We have defined extracurricular activities as these were defined and recorded by the students, themselves, according to standards that were common over the region of the 36 schools. Extracurricular activities fell into seven groupings, or kinds: members of school clubs, officers of school clubs and classes, members of athletic teams, cheerleaders, members of casts of school plays, members of staffs of school papers and yearbooks, members of music groups. The enumeration of a student's activities included each activity reported by him for each school year. Examples of two students' activity reports follow. The numbers following an activity refer to the high school year in which the activity was undertaken.

Vernon High School Senior Boy

Football-1,2,3,4  
Basketball-1,2,3,4  
Baseball-3,4  
Track-1,2,4  
Class President-1  
V-Club Treasurer-3  
V-Club President-4  
V-Club-2,3,4  
Boys' Glee Club-2,3,4  
Mixed Chorus-2  
Junior Play-3

Capital City High School Senior Boy

Football-1,2  
Boys' Pep-2,3  
Track-1  
Bank-1,2,3  
President Trojan Amateur  
Radio Club-3  
Orchestra-3  
Operetta Orchestra-3

These students' activity scores were 24 and 11.

Most of the yearbooks we secured were for four-year schools. We adjusted the data for the few three-year high schools by increasing the three-year activity score by 18.7 per cent which was the proportion which Freshman activities bore to Sophomore, Junior and Senior activities in the four-year schools.

The data on school size and average number of extracurricular activities are presented in Table 5.3, where the schools are grouped into the same classes as in Tables 5.1 and 5.2.

Table 5.3 Number of graduating Seniors and number of extracurricular activities for stated school-size classes

| School Size-<br>Class <sup>a</sup> | Number of<br>Schools | Senior Class Size |      | Mean Number of Activities<br>per School, for Four Years |                         |
|------------------------------------|----------------------|-------------------|------|---------------------------------------------------------|-------------------------|
|                                    |                      | Range             | Mean | Range of<br>school means                                | Mean of<br>school means |
| 1                                  | 4                    | 5-11              | 8    | 17-28                                                   | 21.5                    |
| 2                                  | 5                    | 14-20             | 17   | 13-19                                                   | 15.0                    |
| 3                                  | 11                   | 14-37             | 24   | 9-30                                                    | 18.5                    |
| 4                                  | 4                    | 48-56             | 51   | 13-20                                                   | 16.5                    |
| 5                                  | 7                    | 68-112            | 84   | 9-16                                                    | 12.3                    |
| 6                                  | 1                    | ---               | 160  | ---                                                     | 11.8                    |
| 7                                  | 2                    | 143-221           | 182  | 8.7-10.2                                                | 9.4                     |
| 8                                  | 1                    | ---               | 458  | ---                                                     | 9.1                     |
| 9                                  | 1                    | ---               | 591  | ---                                                     | 9.6                     |

<sup>a</sup>See Table 5.1.

The mean number of activities are presented graphically in Figure 5.3; both the mean for each school and for the schools of each class are presented. The product-moment correlation between school size and the average number of activities reported by Senior students is  $-.51$  ( $p < .01$ ).

The number of students reporting no extracurricular activities, three or fewer activities, and 21 or more activities are presented for schools of four size ranges in Table 5.4

Table 5.4 Number of Senior students reporting various numbers of extracurricular activities during four-year school career for schools within stated size ranges

| Size Range<br>of Schools | Total Number<br>of Senior<br>Students | Number<br>Reporting<br>No Activities | Number<br>Reporting<br>0, 1, 2, or 3<br>Activities | Number Reporting<br>21 or More<br>Activities |
|--------------------------|---------------------------------------|--------------------------------------|----------------------------------------------------|----------------------------------------------|
| 34-100                   | 163                                   | 2                                    | 9                                                  | 72                                           |
| 104-150                  | 219                                   | 1                                    | 17                                                 | 75                                           |
| 211-474                  | 793                                   | 44                                   | 163                                                | 186                                          |
| 618-2287                 | 1573                                  | 171                                  | 420                                                | 223                                          |

Chi square tests were made of the number of students reporting (a) no activities vs. one or more activities, (b) three or fewer activities vs. four or more activities, and (c) 20 or fewer vs. 21 or more activities. In all cases chi square exceeded chance expectation ( $p < .001$ ). Inspection of the data of Table 5.4 shows that the small schools had relatively few students reporting no activities and three or fewer activities, and that they had relatively many students reporting 21 or more activities. The relationship between school size, as the schools were grouped in Table 5.3 and Figure 5.3, and per cent of students in each school size group reporting three or fewer activities and 21 or more activities are represented in Figure 5.4.

We conclude that the Seniors of the small schools reported more extracurricular activities than the Seniors of the large schools by a factor of

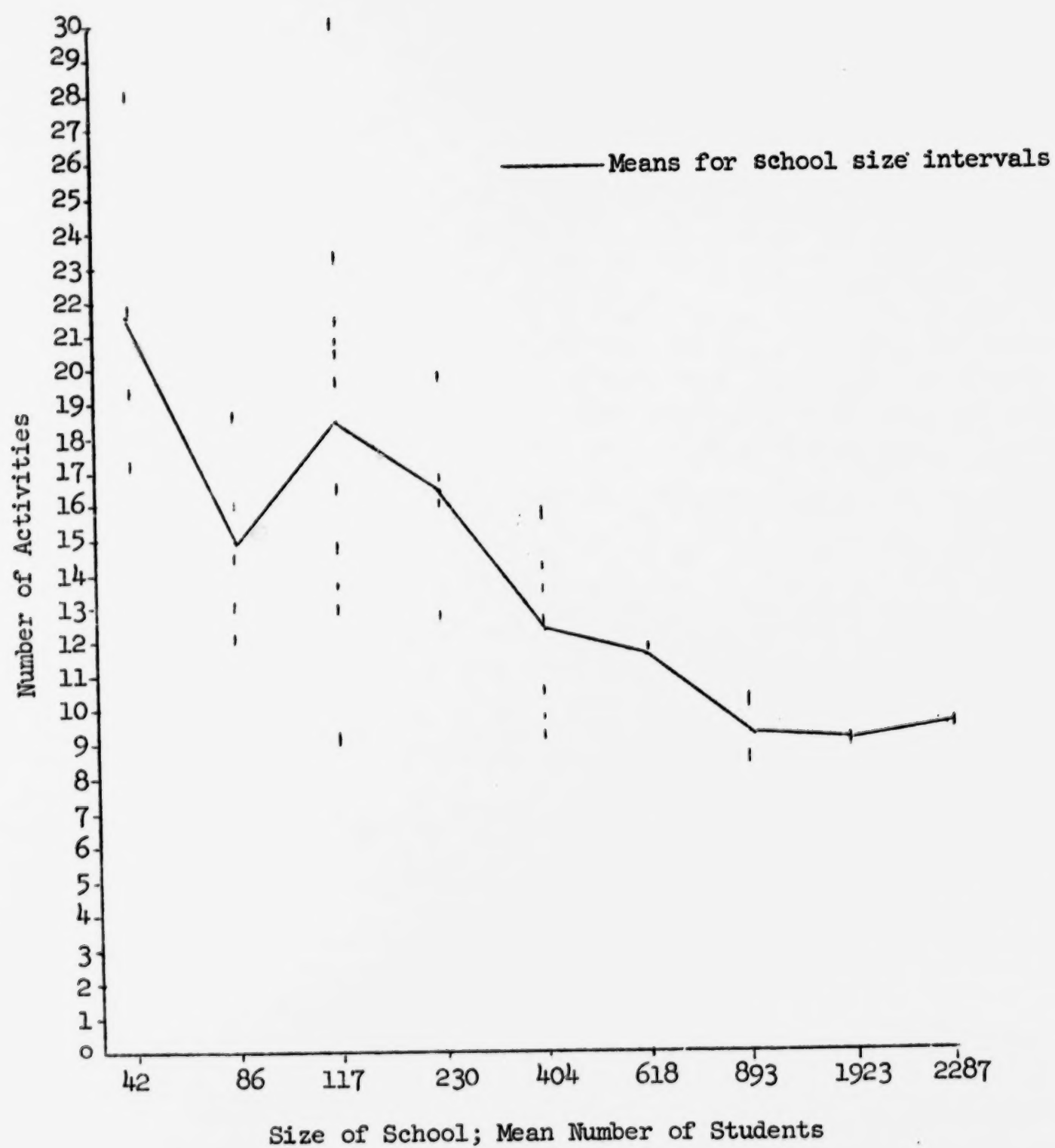


Figure 5.3 Mean number of extracurricular activities reported by graduating seniors, by schools and by school size intervals



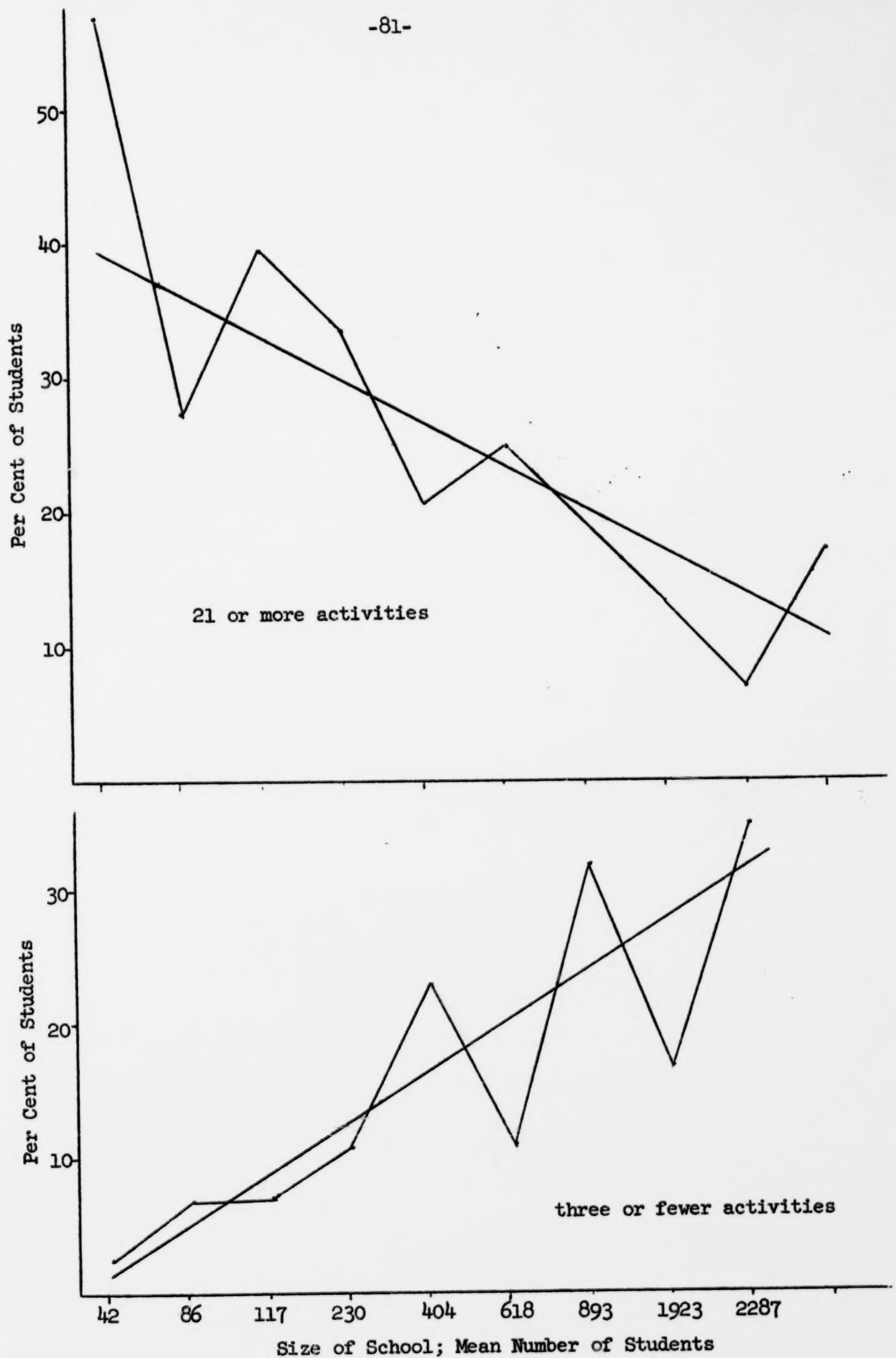


Figure 5.4 Per cent of graduating seniors in schools of different sizes reporting three or fewer activities and 21 or more activities

over two to one. This confirms the data on interschool events, though the magnitude of the school size difference is less and there is no evidence that the smallest schools were deficient with respect to total extracurricular activities, as they were with respect to interschool events.

The extracurricular activities of the schools were classified into seven different kinds (cf. p. 77). A measure of the range, or variety, of the activities of a student is the number of different kinds in which he engaged during his school career. This number constitutes an index of his extracurricular versatility. The maximum versatility score was seven and the minimum was zero; in the illustrative cases, above, the versatility score is 5 for the Vernon High School boy and 4 for the Capital City High School boy. In Table 5.5 the mean versatility scores of the graduating Seniors and the per cent of the Seniors with versatility scores of five or greater are presented for the nine school size-classes. These data are corrected for the three-year schools.

Table 5.5 Mean versatility scores of Seniors, and per cent of Seniors reporting five or more kinds of extracurricular activities for stated school size-classes

| School Size-<br>Class <sup>a</sup> | Mean<br>Versatility<br>Score | Per Cent of Seniors<br>Reporting Five or More Activities |
|------------------------------------|------------------------------|----------------------------------------------------------|
| 1                                  | 4.78                         | 53                                                       |
| 2                                  | 4.29                         | 41                                                       |
| 3                                  | 4.24                         | 48                                                       |
| 4                                  | 3.15                         | 21                                                       |
| 5                                  | 2.81                         | 11                                                       |
| 6                                  | 2.99                         | 12                                                       |
| 7                                  | 2.73                         | 10                                                       |
| 8                                  | 2.39                         | 3                                                        |
| 9                                  | 2.17                         | 4                                                        |

<sup>a</sup>See Table 5.1.

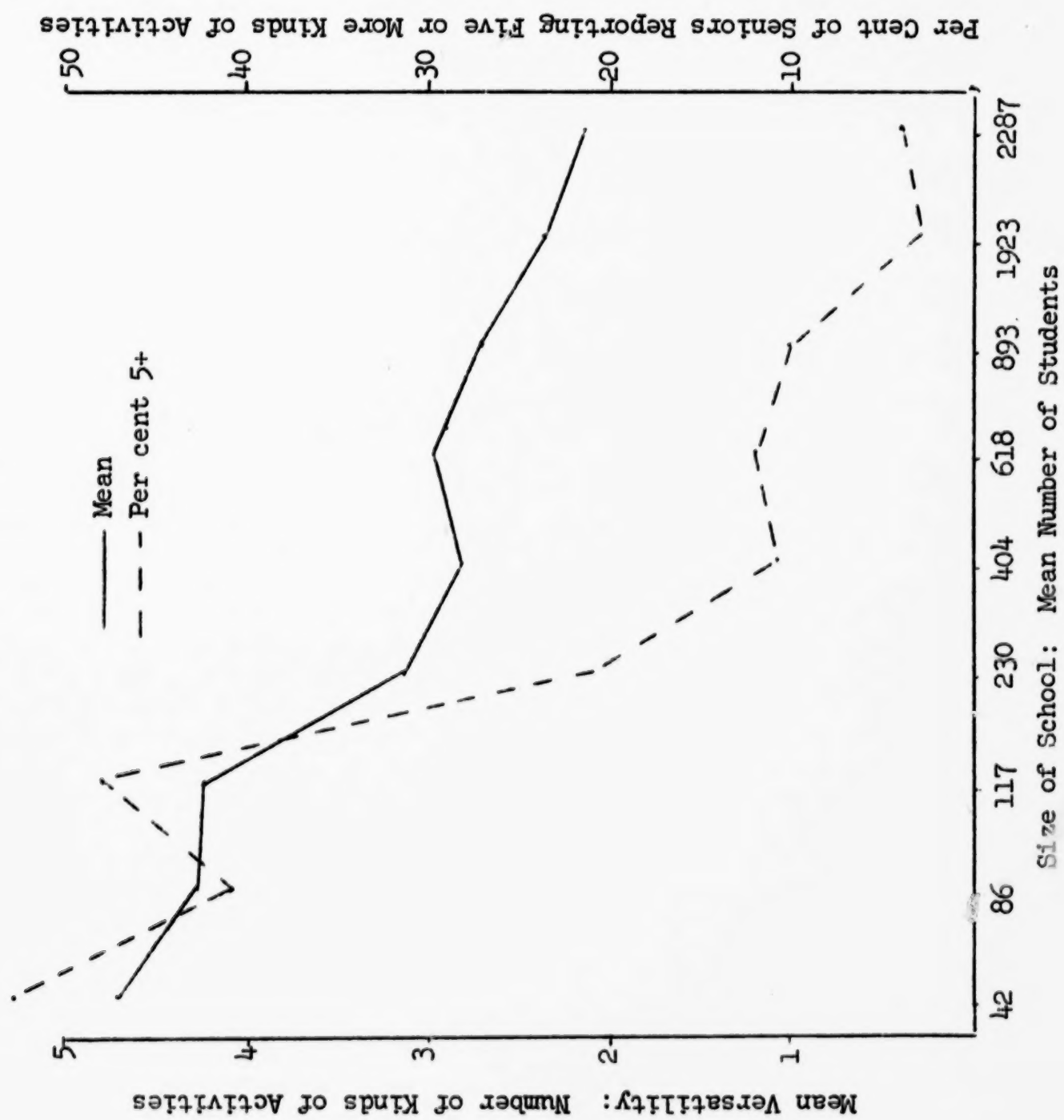


Figure 5.5 School size and extracurricular versatility of graduating Seniors

The data of Table 5.5 are presented graphically in Figure 5.5.

There is a rank-order correlation (T; Kendall, 1948) of .93 between average size of school and average versatility scores of Senior students ( $p < .005$ ).

We were impressed to find this clear evidence of greater participation in school activities by small school students than by large school students in all the public records available to us. The differences were so great as to suggest that not only were they statistically significant differences but that they pointed to a different way of student life in small and large schools.



## CHAPTER 6

### Participation of Large and Small School Juniors in the Nonclass Settings of School

Paul V. Gump

Wallace V. Friesen

It seems obvious that a school which brings together a large number of students can offer its pupils a richer array of activities than can a smaller school. Methods and findings described in Chapter 4 indicate that larger schools did offer a more extensive array of class and nonclass settings. The extra richness was perhaps less than might have been expected; certainly it did not keep pace with increase in size. For example, when the smallest and largest schools were compared (see Table 4.3), population increased by a factor of 65, number of different settings by a factor of 8, and number of different varieties of settings by a factor of only 1.5.

On the other hand, we knew nothing about the relation between number of students, number and variety of behavior settings, and degree of participation of individual students in the array of activities the schools provided. The present chapter reports an investigation of this problem, using as subjects high school Junior students within the nonclass behavior settings of the schools. Nonclass settings were investigated because the most adequate field methods made use of the free decisions of students with respect to entering or not entering, and of participating or not participating in behavior settings. It was essential, therefore, to avoid settings where the students' participation was determined by school officials. In some of the settings included in the investigation such as required assemblies, attendance was required but more active participation, such as being on the program, was voluntary. In this chapter,

therefore, the terms behavior setting and setting refer to the nonclass settings of the schools.

The particular purposes of the study are:

- (a) to describe similarities and differences in the richness of the schools' nonclass offerings;
- (b) to determine the extent to which such offerings were actually used by large versus small school students;
- (c) to compare the quality of participation in the settings of large and small schools.

Behavior setting theory predicts that the participation of large and small school students should differ in extent of penetration into behavior settings. The derivation of this prediction follows:

When enrollments of schools increase, the numbers of their settings do not increase proportionately. This failure of numbers of settings to keep pace with numbers of persons results in more persons being available per setting (see Chapter 4 for data). Behavior setting theory also proposes that a minimum number of important functionaries is required to operate settings of a given type. As more persons become available above this minimum, there is a reduction in forces on any one person to engage in the central and important setting functions. In a large school, students are exposed to long sequences of settings with relatively large numbers of inhabitants. It is therefore predicted that such students will engage, on the average, in comparatively few behaviors which are important to these settings. In the small school, students continually participate in settings which have few inhabitants, which are undermanned; as a result there are strong pressures on and invitations to these small school students to penetrate these settings, to take over significant tasks.

The basic units for the analyses of the behavioral predictions are behavior settings. The behavior setting surveys employed by the present study will be discussed in the first section of this report.

### Surveys of Behavior Settings

One large and four small schools were investigated; the large school, Capital City High,<sup>1</sup> had an enrollment of 2287; the smaller schools, Malden, Walker, Midwest, and Vernon, had enrollments from 83 to 151. For many comparisons, the four smaller schools were pooled together and labeled Midwest County Schools.

Behavior setting surveys of these schools supplied the basis for assessing the availability of activities. For the present study, the surveys included only settings which occurred in the three-month period from the opening of school until the middle of December and which were freely accessible to Junior students. Behavior settings that were routinely used by all students, such as hallways and restrooms were omitted from the behavior setting lists.

Table 6.1 Number of Juniors, number of nonclass behavior settings available to Juniors and ratios of Juniors to the settings for each school

| <u>School</u>          | <u>N. of Juniors</u> | <u>No. of B. S.</u> | <u>Juniors/B.S.<br/>(P/D Ratio)</u> |
|------------------------|----------------------|---------------------|-------------------------------------|
| Walker                 | 16                   | 45                  | .36                                 |
| Malden                 | 18                   | 41                  | .44                                 |
| Midwest                | 21                   | 54                  | .39                                 |
| Vernon                 | 36                   | 54                  | .67                                 |
| Midwest County Average | 22.7                 | 48.5                | .47                                 |
| Midwest County Total   | 91                   | 194                 |                                     |
| Capital City           | 794                  | 189                 | 4.20                                |

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<sup>1</sup>Since only one school provided data for the high end of the size continuum, it was important that this school adequately represent other large schools. As stated in Chapter 4, Capital City High was a community school, thereby providing a balanced subject population; it was a school with an "enviable reputation"; data on the number and variety of its behavior settings indicated that it compared favorably with the other large schools studied.

For each school, settings which operated during the time period studied, comprised approximately 80 per cent of a full year's settings, indicating that the samples of settings were proportional from school to school, and that each list was comprehensive enough to represent the school year. Samples of complete school behavior settings lists are given in Appendix 4.1; sample lists of the nonclass settings are found in the record forms presented in Appendix 6.1. In Table 6.1, the number of Juniors, the number of nonclass behavior settings, and the ratios of the Junior students to settings are presented.

This table demonstrates that in the large school there was a greater number of Juniors who might be expected to attend each nonclass setting than in the small schools. This difference is in accord with the theory and it provides the basis for expecting a greater proportion of the Juniors of the small schools than of the large school to perform tasks of importance in the school's settings. Data concerning the number of Junior students actually present in the nonclass settings of the schools are given in Table 6.4.

#### Variety of Nonclass Activities

One issue of the investigation was that of the richness of activity offerings in the large and small schools. There were 189 nonclass behavior settings useable by Juniors in the large school and an average of 48.5 in the small schools. If richness means numbers, then it is clear that the large school provided the greater richness of opportunity. However, two settings can be different in terms of independence and yet very similar in terms of kind. A principal's office and a head counselor's office are independent but highly similar. A principal's office and a pep club lounge are both independent and dissimilar. Clearly, if richness means diversity, a more discriminating measure than independence is required. This is provided by the concept of behavior setting variety, described in Chapter 2. It will be recalled that variety measures are directed to differences in kind. With such an index the question



Table 6.2 Varieties of nonclass behavior settings available to Juniors at Capital City and Midwest County High Schools Sept.-Dec. 1960

| Variety Number       | Variety Name                                  | Presence (x) or Absence in: |        |        |         |        |
|----------------------|-----------------------------------------------|-----------------------------|--------|--------|---------|--------|
|                      |                                               | Capital City                | Walker | Malden | Midwest | Vernon |
| 1                    | Athletic Contests, Indoors                    | x                           | x      | x      | x       | x      |
| 2                    | Athletic Contests, Outdoors                   | x                           | x      | x      | x       | x      |
| 8                    | Book Exchange, Rentals                        | x                           |        |        | x       |        |
| 15                   | Dances                                        | x                           | x      | x      | x       | x      |
| 17                   | Dinners, Banquets                             | x                           | x      |        | x       | x      |
| 18                   | Doctors' Offices, Clinics                     | x                           |        |        |         |        |
| 20                   | <sup>a</sup> Educational Groups, Academic     | x                           |        |        |         |        |
| 22                   | <sup>a</sup> Educational Groups, Home Econ.   | x                           |        |        |         | x      |
| 23                   | <sup>a</sup> Educational Groups, Music        | x                           |        |        |         |        |
| 24                   | <sup>a</sup> Educational Groups, Physical Ed. | x                           | x      | x      | x       | x      |
| 24A                  | Swimming                                      | x                           |        |        |         |        |
| 25                   | <sup>a</sup> Educational Groups, Shop, Agric. | x                           |        |        |         | x      |
| 26                   | Elections                                     | x                           |        |        | x       |        |
| 28                   | Fairs, Circuses, and Carnivals                | x                           | x      | x      | x       | x      |
| 35                   | Food Sales                                    | x                           | x      | x      | x       | x      |
| 36                   | Fund and Membership Drives                    | x                           |        | x      | x       | x      |
| 39                   | Government, School Offices                    | x                           | x      | x      | x       | x      |
| 48                   | Initiations                                   |                             | x      |        |         | x      |
| 52                   | Libraries                                     | x                           | x      | x      | x       | x      |
| 54                   | Meetings, Executive                           | x                           | x      | x      | x       | x      |
| 55                   | Meetings, Organization Business               | x                           | x      | x      | x       | x      |
| 56                   | Meetings, Social-Cultural                     | x                           | x      | x      | x       | x      |
| 57                   | Meetings, Social-Recreational                 | x                           |        |        |         |        |
| 65                   | Outings                                       | x                           | x      | x      | x       | x      |
| 68                   | Parties                                       | x                           | x      | x      |         | x      |
| 69                   | Photographic Rooms                            | x                           |        |        |         |        |
| 70                   | Plays, Concerts, Programs                     | x                           | x      | x      | x       | x      |
| 80                   | Restaurants                                   | x                           | x      | x      | x       | x      |
| 81                   | Lounges, Student                              |                             | x      |        | x       |        |
| 83                   | School, Coaches' Room                         | x                           | x      | x      | x       | x      |
| 84                   | School, Custodians' Room                      |                             | x      | x      | x       | x      |
| 85                   | School, Special Days                          |                             | x      |        |         |        |
| 95                   | Volunteer Work, Fund Raising                  | x                           | x      | x      | x       | x      |
|                      |                                               | 29                          | 24     | 19     | 22      | 22     |
| Total Varieties = 33 |                                               | % of Total 88%              | 73%    | 58%    | 67%     | 67%    |
|                      |                                               | % of Capital City 100%      | 83%    | 66%    | 76%     | 76%    |

<sup>a</sup>In a complete list of school settings, these variety titles would include school classes; their presence here indicates that the school had a nonclass setting of the indicated variety, e.g., both Capital City and Vernon had the setting Future Homemakers of America, Regular Meeting which was judged to belong to the Variety Educational Groups, Home Economics. For other examples see Appendix 4.1.

can be asked: "What varieties (kinds) of nonclass settings were available to Juniors in the Capital City and Midwest County schools?"

Table 6.2 lists the 33 varieties of nonclass settings that were present in the five schools. It can be seen that there were more gaps in the variety offerings of the small schools than of Capital City High. The extent of this difference in variety offerings is indicated in Table 6.2 by the number of varieties in each school; this number is also expressed as per cent of the total number of varieties in the five schools and as per cent of the varieties in Capital City High.

Capital City High School provided its Juniors with 88 per cent, and the small schools with 66 per cent (mean) of the behavior setting varieties that occurred in all the schools. The small schools provided approximately 75 per cent (mean) of the number of varieties offered by Capital City High.

What were the specific advantages offered by the large school's greater variety? Variety identification numbers (see Table 6.2) and examples of settings in the varieties which were unique to Capital City High are as follows:

| <u>Variety</u><br><u>Number</u> | <u>Examples of Behavior Settings</u> |
|---------------------------------|--------------------------------------|
| 18                              | School Nurses Office                 |
| 20                              | All City Debate Clinic               |
| 23                              | All City Orchestra Clinic            |
| 24A                             | Swimming Meet                        |
| 57                              | Chess Club Meeting                   |
| 69                              | Photographic Rooms                   |

A number of these unique settings appear to be somewhat peripheral to life in school in that they were established for quite special groups.

In order to deal more economically with the varieties, the schools' behavior settings were coded into larger categories or super-varieties. The super-varieties clustered the settings according to a commonsense idea of the reason for the existence of the settings. The super-varieties are identified and the number of settings falling into each are presented for each school in

Table 6.3. This table shows that all five schools offered activities in nearly all of these commonsense classes of settings.

These data make it very clear that although the large school had many more settings, the small schools dispersed their smaller number of activities into nearly as many varieties and super-varieties of settings as the large school.

Table 6.3 Number of nonclass settings in each super-variety for Capital City and Midwest County high schools

| Super-Varieties of Settings                                           | Capital City | Schools within Midwest County |        |         |        |
|-----------------------------------------------------------------------|--------------|-------------------------------|--------|---------|--------|
|                                                                       |              | Walker                        | Malden | Midwest | Vernon |
| Required Assemblies (all assemblies at which attendance was required) | 4            | 4                             | 4      | 4       | 2      |
| Operational Settings (school offices, lunchrooms, clinics, etc.)      | 30           | 6                             | 5      | 8       | 5      |
| Athletics (football, basketball, wrestling, etc.)                     | 31           | 8                             | 8      | 9       | 8      |
| Parties and Dances                                                    | 17           | 5                             | 6      | 4       | 10     |
| Government (student council, executive committees)                    | 18           | 3                             | 2      | 3       | 3      |
| Journalism Settings (newspaper staff, annual staff)                   | 4            | 0                             | 1      | 2       | 1      |
| Voluntary Work Settings (magazine sale, food sale, car wash, etc.)    | 14           | 4                             | 4      | 7       | 10     |
| Outings (trips to places for music, art, drama)                       | 8            | 2                             | 3      | 5       | 4      |
| Club Meetings (Pep Club meetings, special interest clubs, etc.)       | 29           | 4                             | 2      | 5       | 5      |
| Voluntary Programs (plays, music programs, which were not required)   | 33           | 9                             | 6      | 7       | 6      |
| Smoking Room                                                          | 1            | 0                             | 0      | 0       | 0      |
| Totals                                                                | 189          | 45                            | 41     | 54      | 54     |

## Use of Behavior Settings

### Method

Subjects. The small school sample consisted of all 91 Juniors enrolled in four high schools of Midwest County. The large school sample was 604 Juniors from Capital City High School. Of the 794 Juniors enrolled at Capital City High, there were 122 Juniors who were not at school or had schedule conflicts when we collected the data at Capital City; 64 were excluded because they were non-Caucasians (all Juniors in Midwest County were of the Caucasian race), and four subjects were rejected because of evidence on their questionnaires which cast serious doubt on truth of their answers.

Procedure. The Juniors from each of the five schools were given a complete list of the nonclass behavior settings which had occurred in their school during the previous three months, since the beginning of school. Most of these Behavior Setting Reports were administered in study halls; special times and places were provided for those students without a regular study hall period. With the list of their school's settings provided, the students were simply asked to indicate which settings they had entered during this time; the question was "Were you there?" After completing this procedure the students were instructed to explain what they did in each setting they had entered. The complete instructions and sample questionnaires from Capital City and Midwest High School may be found in Appendix 6.1.

Unlike many other studies of behavior within institutions, the reports of activity did not involve unaided memory, nor reflections contaminated with likes and dislikes. Rather, each student in a particular school was given a map of the settings which constituted his potential activities for three months. Moreover, the settings represented units whose equivalence and independence could be determined by use of the K-21 Behavior Setting Index, (see Chapter 2 for a



more complete dicussion). Thus each student had an identical opportunity to recall every one of his activities over the period covered by the setting list.

Coding the Quality of Participation. Each student's report of his actions in each setting was coded for the degree of importance and centrality of his position in that setting. The four levels of participation were based on the "levels of penetration into settings" as defined by Barker and Wright (1955).

Briefly, the students' activity in settings was rated as follows:

- 1 a customer, ordinary member, or part of an audience in a setting.
- 2 an active, responsible member in a setting which, by its nature, required that each member accept responsibility for contributing action. Examples: Basketball Practice, Junior Play Practice.
- 3 a performer at a low level; subject held an important or responsible position in a part of the setting which was not directly involved in the central activity. Examples: working at concession stands at Basketball Games, ushering at the Junior Class Play.
- 4 performer in the central activity; subject was directly involved in the maintenance or control of the setting. Examples: players in Football Games, president of a Y-Teens Meeting.

In this chapter, responses to a setting coded 1 and 2 will be combined and defined as entries. Responses coded 3 and 4 will be combined and defined as performances, or setting performances. When only Level 4 performances are discussed, they will be called high-level performances. When entries or performances are combined (codes 1 through 4), they will be referred to as participations.

#### Results--Setting Size and Participation

Setting Size. The median number of Juniors in each setting at Capital City High was over three times as great as the median number in small school settings (see Table 6.4, line 1). Thus the prediction that the large school settings would be relatively highly populated is verified.

Participation in Settings. Line 2, Table 6.4 indicates that on the average, the large school Juniors entered and participated, on some level, in six more settings than did the small school Juniors. The significance of this difference

was  $p < .001$ . Because of the heterogeneity of the large and small school variances a chi square median test was employed for the comparisons in Tables 6.4 and 6.5.

Table 6.4 Size of behavior settings and the mean participation of Juniors

|                                                                                                                                           | Walker | Malden | Midwest | Vernon | Midwest<br>County (Mean) |
|-------------------------------------------------------------------------------------------------------------------------------------------|--------|--------|---------|--------|--------------------------|
| 1. Median number of Juniors per behavior setting                                                                                          | 11     | 13     | 8       | 11     | 11                       |
| 2. Mean number of <u>nonclass</u> settings in which Juniors participated. (Includes offices, required assemblies, smoking room)           | 30.2   | 26.4   | 26.7    | 24.7   | 26.4                     |
| 3. Mean number of <u>extracurricular</u> settings in which Juniors participated (Omits school offices, required assemblies, smoking room) | 22.4   | 18.3   | 18.1    | 19.5   | 19.4                     |
| 4. Extracurricular participation scope: Mean number of different super-varieties attended                                                 |        |        |         |        | 6.5                      |

Participation in school offices, attendance at required assemblies, and the smoking room did not represent what is ordinarily thought of as extracurricular activity. Accordingly an extracurricular index was developed; this index reflects participation in all the remaining super-varieties of behavior settings: Athletics, Parties and Dances, School Government Settings, Journalism Settings, Voluntary Work Settings, Outings, Club Meetings, and Programs. In line 3 of Table 6.4 it can be seen that the small school students participated in the extracurricular settings just as frequently as did large school students. The equality in this respect is somewhat misleading. The distributions of the per cent of Juniors who participated in different numbers of extracurricular settings are presented in Figure 6.1. It is very clear from this graph that the population of the large school was widely dispersed from the mean; a relatively large proportion of students engaged in ten or less settings, while a small

Capital City

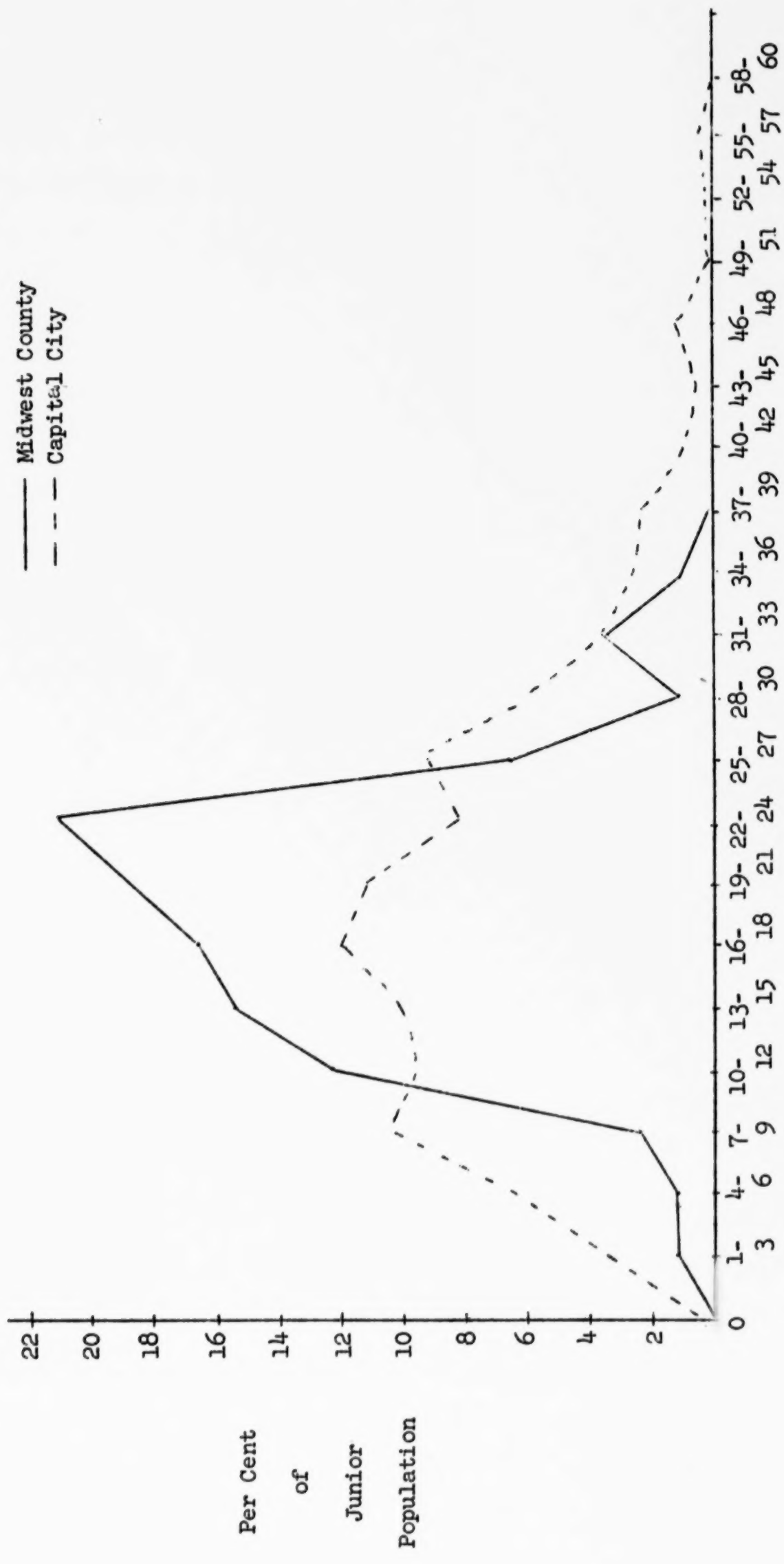
36

32.9

18.4

5.4

ly



Number of Settings in Which Juniors Participated

Figure 6.1 Per cent of small and large school Juniors who participated in different numbers of extracurricular behavior settings

proportion participated in over 37 settings, more than any small school student. This small portion of the large school sample elevated the group mean. In contrast, nearly all small school students participated in 10 or more settings, and only a small proportion of the sample participated in either an excessively large or small number of settings.

The small school students participated in a slightly greater number of super-varieties of behavior settings than the large school students (Table 6.4, line 4) ( $p < .001$ ). Thus, although the means would indicate a similar number of extracurricular setting participations, the small school Juniors participated in more kinds of these activities.

The data presented thus far have demonstrated that the students' participation in settings of the large school did not coincide with the larger number and wider variety of settings offered. Rather, Juniors in the large school participated in about the same number of extracurricular behavior settings as did the small school Juniors. Only in the case of required assemblies and in the school's operational settings (offices) did the large school students participate more frequently. The students in the small schools actually participated in a wider variety of extracurricular activities in spite of the greater variety provided by the large school.

The small school students participated in a higher proportion and a wider variety of the settings available to them. The hypothesis of greater numbers of forces toward entry into the small schools' settings is tested directly in Chapter 8; however, this finding lends support to that hypothesis.

#### Results--Penetration into Settings

Up to this point only the number and range of participations have been presented. Nothing has been said about the quality of these participations. The most central hypothesis of this investigation was that the quality of participations would differ between large and small school students. It was



predicted that small school students, in relation to those of the large school, would penetrate their settings more deeply, would occupy more positions of importance, of responsibility. Data for the test of this hypothesis are displayed in Table 6.5 and in Figure 6.2; the table yields information on central tendency, the figure shows data on variance.

Table 6.5, line 1 indicates that the large school Juniors entered settings as audience persons or as members only with much greater frequency than small school Juniors ( $p < .001$ ). In contrast, line 2 demonstrates that the Juniors in the small schools held responsible positions with more than twice the frequency of the large school Juniors ( $p < .001$ ). Furthermore, line 3 indicates that small school Juniors held high level performances six times as frequently as did large school Juniors ( $p < .001$ ).

Table 6.5 Penetration quality of participations in settings by the Juniors at Midwest County and Capital City High Schools

| Level of participation                                                | Mean Number of Settings in Which Juniors Participate at Designated Levels |                     |
|-----------------------------------------------------------------------|---------------------------------------------------------------------------|---------------------|
|                                                                       | <u>Midwest County</u>                                                     | <u>Capital City</u> |
| 1. Entry only: levels one and two                                     | 17.7 <sup>a</sup>                                                         | 29.4                |
| 2. Performance: levels three and four                                 | 8.7                                                                       | 3.5                 |
| 3. High performance: level four only                                  | 3.6                                                                       | .6                  |
| 4. Number of different super-varieties in which performances occurred | 3.7                                                                       | 1.6                 |

<sup>a</sup>The separate small schools are not presented in this table, examination of the separate means revealed almost no differences between the four small schools.

Figure 6.2 presents the distributions of the number of settings in which each subject of the two populations performed. Almost 30 per cent of the large school Juniors performed in no settings at all, while 2 per cent of the Juniors from the Midwest County schools failed to perform in any settings. Put another

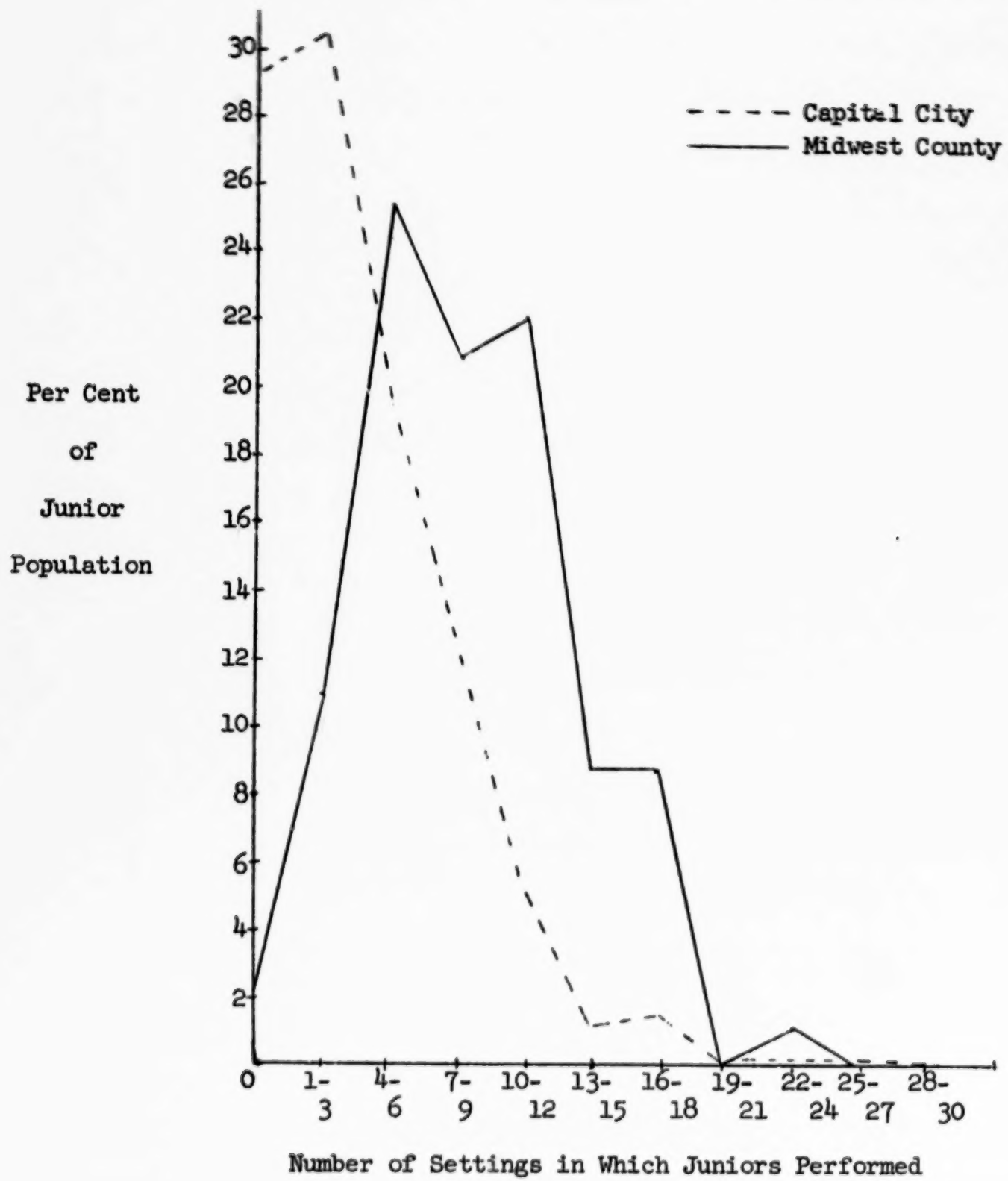


Figure 6.2 Per cent of large and small school Juniors who performed in different numbers of behavior settings

way, the majority (58 per cent) of students in the large school performed in three or less settings, while most (80 per cent) small school students performed in four or more settings. It is clear, then, that the large school Juniors had relatively superficial and inactive contact with their settings, while the small school Juniors were more actively contributing to the functioning of their settings.

Returning to Table 6.5, line 4, it can be seen that the variety of activities in which the Juniors from the large school performed was less than half the variety in which small school Juniors held responsible positions when this is measured by super-varieties ( $p < .001$ ). Not only did more small school Juniors perform in a greater number of settings than did large school Juniors, but they also held these responsible positions in twice as many kinds of activity.

Performance in Super-Varieties. The superiority of performances for small school students is clear; the question arises as to whether this relatively high level of performance was generally distributed throughout all parts of the schools' nonclass settings or whether it resulted from particularly high performance opportunities in specific areas. It is well realized, for example, that in small schools a greater proportion of students are invited, sometimes pressed, into performance roles in athletics. To test the spread of performances over areas of school life, comparisons were made between the large and the small schools on the proportions of total performances in each of the ten super-varieties. For example, the proportion of total performances devoted to Athletics in the small schools was compared with this proportion in the large school. Results showed that the proportions were quite similar in six areas: Required Assemblies, Athletics, Government Settings, Journalism Settings, Meetings and Voluntary Programs. The large school had proportionately (not necessarily absolutely) more performances in Operational Settings and in Parties and Dances; the small schools had

proportionately more performances in Voluntary Work Settings and in Outings. When these latter settings are removed from the comparison, the small schools still average more than twice as many performances as the large school. The evidence supports the conclusion that the performance superiority of the small schools was reasonably consistent throughout the nonclass areas of school life.

Sex and IQ. In order to study the effects of school size on subgroups of the sample populations, the boys and girls of both schools were divided into four IQ groups for comparison. The mean number of settings in which performances occurred for boys and girls of each intelligence group are presented in Figure 6.3 for the large school and the small schools. Several general results are clear from these data:

- (1) When school size and IQ classifications were held constant, girls performed significantly more often than boys. (There was one exception; in the large school, dull girls did not perform significantly more frequently than dull boys.)
- (2) Brighter students performed more frequently than duller ones. Computation of tests between bottom and top halves of the IQ distributions in relation to performance yielded statistical significance for boys in both schools and for girls in Capital City; the test comparing bright and dull girls at Midwest failed to reach statistical significance.

#### Performance as a Function of Size: Additional Data

During the course of another study, data equivalent to the performance data of the present investigation were obtained from Juniors in four additional schools. Compared to the small schools of the present study, two of these additional schools (Dorset and Hearn) had smaller enrollment, and two (Haven and Eakins) had larger enrollments. Since the large and small schools in the main study differed radically in enrollments, the additional data made it possible to test the effects of school size at additional points on the school size continuum.

To control for differences in time periods for the participation reports in the various schools, ratios of extracurricular performances to total extracurricular participations were calculated. This proportion of performances to



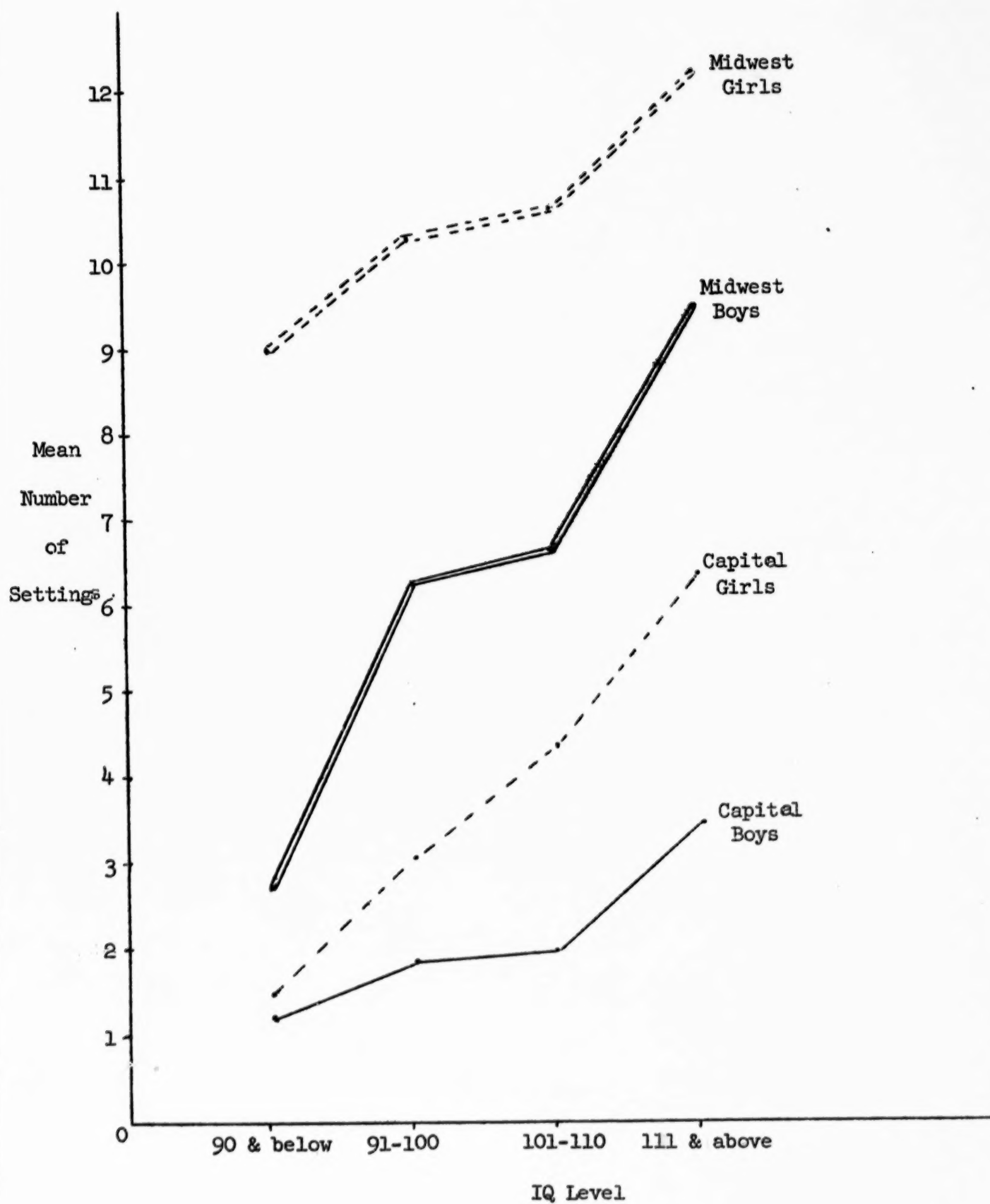


Figure 6.3 Mean number of behavior settings in which stated sex, IQ, and school groups were performers

participations by Juniors is plotted as a function of school size in Figure 6.4. Data in the figure indicate that as school size increased, there was a decrease in the proportion of encounters of students with settings which involved behaving in the central and important tasks of the behavior settings. Almost one-half of the extracurricular participations of students in the very small schools (Dorset and Hearn) were performances. This proportion falls to around the forty per cent mark for the schools in the 83 to 221 range, and it then falls to about thirty per cent for the medium sized school (Eakins); it falls again to about fifteen per cent for students in the very large school (Capital City). Since data in Table 6.4 demonstrate no significant differences in rates of extracurricular participation between large and small schools, the decreasing proportions of performances in Figure 6.4 suggest that as school size increased, the frequency of performance decreased. Inspection indicates that a rapid deceleration in performance rates begins in the school size interval following 339.

#### Essential Findings

This study has demonstrated that a large school provides a somewhat larger number and wider variety of nonclass activities than a small school. But in spite of specific large school advantages in the variety of settings, the small school makes the same general kinds of activities available to its students. Moreover, the small school provides a higher proportion of settings to the number of students; this has the following consequences for the students' participations in activities:

- (a) Small school students participate in the same number of settings commonly regarded as extracurricular, as do large school students.
- (b) Small school students participate in a wider variety of extracurricular activities than do the students in a large school.

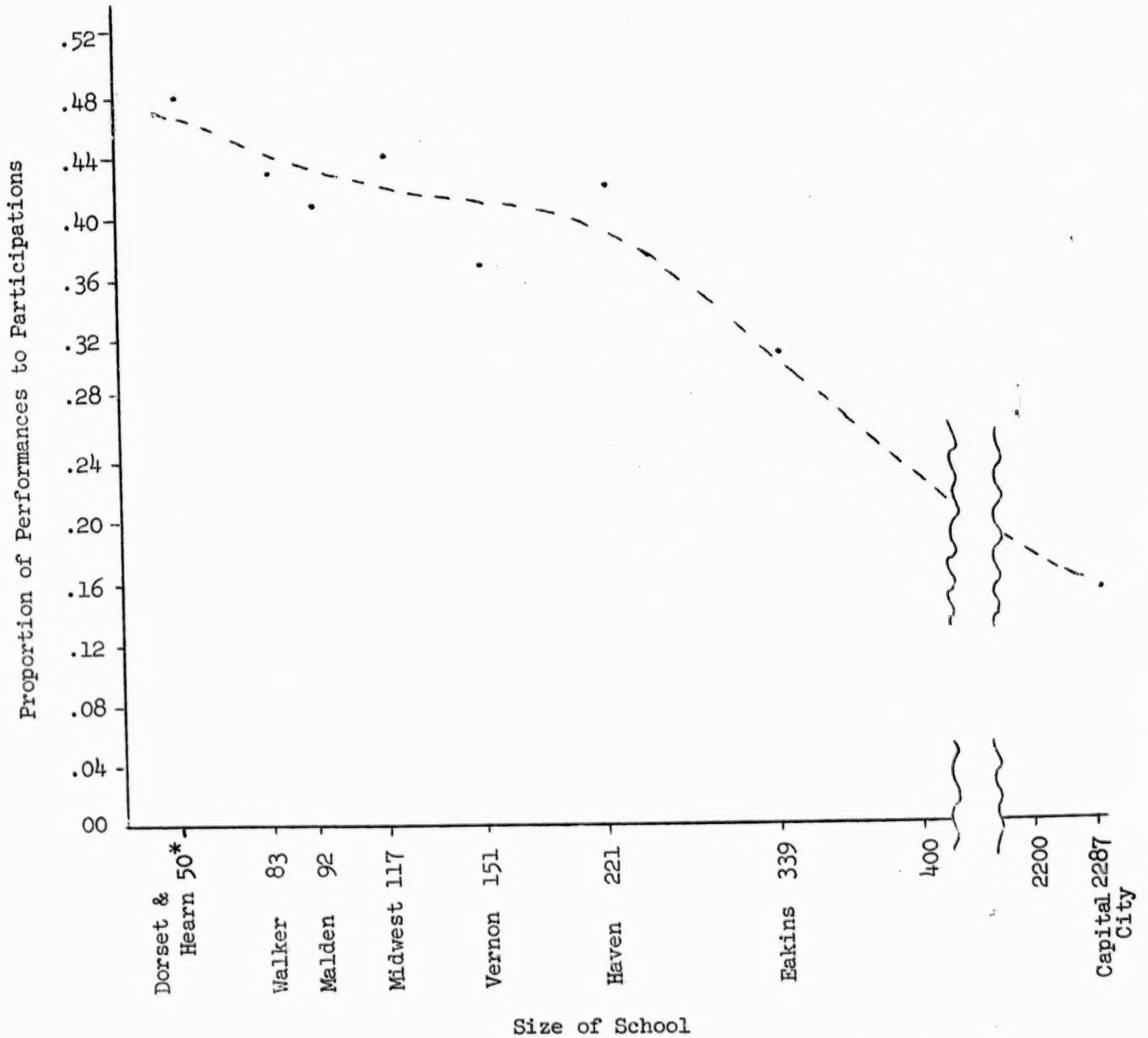


Figure 6.4 Proportions of performances to participations in extra-curricular settings by Juniors as a function of school size

\*Mean enrollment for the two schools

- (c) A much larger portion of **small** school students hold positions of importance and responsibility.
- (d) Finally, small school students hold responsible and central positions in a wider variety of activities than do students in a large school.

Investigation in the present chapter has been directed to the number and kinds of student participation in the nonclass settings of the schools studied. The question naturally arises as to the meaning of this participation to the students. What did they get out of their activity? It is to this issue that the next chapter is addressed.



## CHAPTER 7

### Satisfactions Derived by Juniors from Nonclass

#### Settings of Large and Small High Schools

Paul V. Gump

Wallace V. Friesen

Evidence presented in Chapter 6 indicated the following:

1. Small school nonclass behavior settings contained a median of 11 Juniors per setting; large school settings a median of 36. In terms of the theory, the small school settings were relatively undermanned.
2. Small school Juniors occupied positions of centrality and responsibility in an average of 8.6 settings, large school Juniors in an average of 3.5 settings. In terms of the theory, small school Juniors occupied over twice as many performance positions as did large school Juniors.

These findings present the description of the ecological conditions and the overt behavior of the student population; they provide objective anchors for a more phenomenal inquiry. The central question of this chapter is what participation in settings meant to large and small school Juniors.

Effects of undermanned behavior settings were predicted in Chapter 2 of this report. Many of these hypotheses are predictions of overt behavior; however, they can also be related to experiences of setting occupants. Thus when the theory predicts that occupants of undermanned behavior settings will engage in "more difficult and more important tasks" (Derivation 1.2, p. 28), it is to be expected that Juniors in small schools will report setting experiences which reflect feelings of challenge or importance. The present investigation tests the prediction that small school Juniors will report different patterns of satisfactions derived from nonclass behavior settings than large school Juniors report.

## School Size and Reported Satisfaction

### Data Gathering Procedure

In the Spring of 1961, there were 88 Juniors in the Midwest County high schools. A group of 88 Capital City Juniors was carefully selected to match this Midwest County sample on variables of sex, I Q , and race.

The senior investigator assembled the subjects in small groups of 15 to 25 and thanked them for their earlier, valuable help in connection with the Behavior Setting Report, (Chapter 6). Their cooperation was requested for a final step in the investigation: reporting what their participation in behavior settings had meant to them.

Each student's Setting Report was returned to him and he was asked to refer to this as he responded to the following lead questions:<sup>1</sup>

1. Which of the settings I have entered were especially good, satisfying, worthwhile—plus?
2. What I did, or what went on, that made these settings good—plus; what I enjoyed or got out of the setting?

In order to encourage conscientious and rich replies to the second item, the investigator offered the following suggestions:

When trying to explain what's good about an activity, there are two ways of thinking that can help. You know that we all have desires, needs, wants. We can think of which of our desires or needs got satisfied in the activity and explain it that way. The other way is to look at an activity or setting and think about it; it has a number of parts or aspects. Try to recall which part in particular was good, satisfying, worthwhile, and write about that. Using those two helps, you should be able to explain in a way so we can understand what the activity or setting meant to you...

The satisfaction-report protocols yielded a selection of 1 to 8 "good settings" with an average of 2.5 settings per respondent. Almost all students made some attempt to explain why their selected settings were remembered

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<sup>1</sup>A copy of the report form is given in Appendix 7.1. Students were also asked to report on "not-so-good" settings and on classroom settings. These data are not included in this report.

as satisfying. Content analysis of the explanation, "why it was good," provides the basic data for this report.

### Content Analysis

The code for analyses of the student responses was empirically derived. An a priori framework for coding was avoided because it seemed desirable to obtain a code which remained quite close to students' ideas and feelings. This method left opportunity for results which might not have been predicted by the theory.

A large number of subject protocols were studied. From this "listening to" the students' responses, it seemed that several satisfactions frequently appeared in a single answer. When this occurred, each satisfaction was marked off as a separate unit. Thirty-nine different categories of satisfaction units were eventually identified. The number of different satisfactions yielded by this approach was somewhat burdensome, but this disadvantage was accepted in order to achieve a coding scheme whose categories required a minimum of interpretation by the coder.

The actual coding scheme is described below with definitions of the coding categories and examples of units.

| <u>Categories</u>       | <u>Definitions and Examples</u>                                                                                                                                                                                                                                      |
|-------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1. Physical Competence  | Increase in or maintenance of physical fitness or skill.<br>(Tadpole Club) "... improves your swimming ability"<br>(Football--Home) "... keeps your reflexes alive."                                                                                                 |
| 2. Emotional Competence | Improved self-confidence or reduction of emotional blocks.<br>(Junior Class Play) "It gave me more confidence."                                                                                                                                                      |
| 3. Social Competence    | Increase in getting along well with others, in handling oneself in different situations.<br>(Swim practice) "... and I learned to get along with other people"<br>(Basketball games away) "It also helps you adjust to different surroundings than you are used to." |

4. Other Competence      Becoming able to do new tasks, or to do old tasks better.  
                              (Blithe Spirit—Play) "I learned the ways and functions of  
                              a good light director"  
                              (Xmas Program Rehearsal) "I learned what I was doing wrong  
                              and how to improve my voice and project sound."

In the competences above, the subject reports maintenance or increase in capacity. In the next five categories the subject indicates that he was exposed to, or learned about, various factors. There is no direct evidence of a capacity increase. Since students are exposed to many things in their settings, it is a very easy answer to say one "learned about" these things.

5. Learn About-Social      Opportunity to learn about formal and informal social relationships, to know more of human nature.  
                              (Junior Class Meeting) "It gives a chance to learn parliamentary procedure."  
                              (Girls Intramurals) "I can learn what other girls are like."
6. Learn About-Skill      Learning about various skills but with no direct statement of capacity increase.  
                              (Junior Class Play) "Here we learned many things about acting."  
                              (Swimming) "I like to see good divers and swimmers; after seeing the way they do it, I try to improve myself."
7. Learn About-Cognitive Areas      Learning about knowledge areas, as opposed to social and skill areas.  
                              (Debate) "I learned more about the U. N."  
                              (Proctor) "I learned more about Biology and Physiology than in any regular class."
8. Learn About-Vague      Learning about inferred from general statements **that** the setting was "educational," "interesting," etc. but with no particulars given.  
                              (Trip to Leavenworth) "I learned a lot of interesting things that I didn't know before."  
                              (Science Club) "This presented very educational and worthwhile information."
9. Learn About-Future      Learning things which may help with educational or occupational planning.  
                              (Career Day) "It provided information on careers which students very possibly would later engage in."  
                              (Guidance Office) "I like having a place to go where people can help me decide where to apply to college."
10. Challenge      Satisfaction in hard work, self-test, attempts to progress.  
                              (Junior Class Magazine Sale) "This gave me a chance to see whether or not I am a good salesman. I now believe that I am."



11. Competition      Zest in the same struggle or test situations as in challenge, but the opposing forces are from people.  
(Basketball Intramurals) "I like tough hard competition and I usually get it."  
(Junior Class Magazine Sale) "I liked having the competition of fellow classmates."  
(Football) "I liked it because of the joy of a good hard tackle or because you have stopped a play."
12. Success          Positive outcome of individual or group endeavors: a good job, successful job.  
(Swim Meet) "... results were obvious," (referring to very successful interschool contest).  
(Football) "I knew we had a good show to put on."
13. Contribution to Others      Important help to social cause or group. Does not include peripheral assistance like cheering for or being a customer; these latter units are called Support Indicators (24).  
(Hall Monitor) "I enjoy helping out down at the office—I really enjoy helping teachers and the principal."  
(Wrestling) "It also enables me to help the school and coach."
14. Big Participation      Doing a lot, or doing something important.  
(Science Club) "I got the speakers for all of these meetings for one thing."  
(Pep Club Rally) "I was one out of four cheerleaders that got before the student body and lead cheers at pep assemblies and also cheered at all the games, at all home and away games."
15. New Experience      Enjoyment of novel events, places, activities.  
(Homecoming Parade) "This was something new for me."  
(Junior Class Play) "It gave me a chance to be someone else for a change."
16. New People          Meeting, or knowing for first time, people one has not known before.  
(Menninger Dinner) "I like to see and meet new people."  
(Band Day-K.U.) "I met many other young people... with whom I became good friends."
17. Escape              Escape from usual routines. Much like New Experience except that the new is not the focus, the escape from the old is the pleasure.  
(Regular Assembly) "I enjoyed them because you are dismissed from class to go."  
(Basketball) "... but the main reason I think was to get out and go some place because in a bluenosed town like this its hard to have any fun."
18. Something to Do      Enjoyment in "doing something." The qualities of this something are not stated; the main idea is that doing something is better than doing nothing.  
(Proctor) "It gives me something to do with my spare time."  
(Art Exhibit) "It passes the time when I arrive at school early."

19. Competition-  
Vicarious Observing struggle and competition.  
(Football) "I enjoy watching the team pit its skill against opposing schools."
20. Excitement Pleasure in being stirred up usually through watching others; enjoyment of suspense—as a pattern—whether or not excitement is mentioned.  
(Election) "... the fall elections have excitement to them."  
(Basketball) "The suspense of who is going to win or lose."
21. Vicarious  
Valence Liking for the "show" put on by others; more specific satisfaction not stated.  
(Freshman Initiation) "It's fun to see some of those poor freshmen all messed up going through what we had to go through."  
(Football) "I did enjoy watching it."
22. Action  
Valence Liking for the activity engaged in; more specific kind of satisfaction not indicated.  
(Swimming Practice) "I also enjoy swimming very much so I do a lot of swimming."  
(Junior Class Play) "I enjoyed being in the Junior class play very much. We had a lot of fun putting it on."
23. Unspecified  
Valence Satisfaction with setting seems clear but not specific; the vicarious-action distinction is uncertain.  
(Football) "I like football because you can have a lot of fun going to football games."
24. Support In-  
dication to giving minor or token help or support.  
Other (Basketball) "... to cheer our team on."  
(Elections) "... to support (by vote) friends."
25. Support from  
School Adults Support from key adults in school.  
(Coach's Room) "I like the way he left his door wide open. He was always ready to discuss problems you might have."
26. Support from  
Others Support from peers and from nonschool groups.  
(Basketball) "It was a lot of fun playing when you knew the fans were behind you."
27. Be Valued Being in the focus of attention, a status person, receiving an honor or prize.  
(Homecoming Parade) "It also gave me recognition among the people and students of the school."  
(Football) "A boy can gain respect and attention by playing football."
28. Informal  
Affiliation Companionship, fun with others, conversation.  
(Varsity Dances) "I deeply appreciated the friendly and informal attitude of those present."  
(Basketball) "You get to see your friends after school."

29. Affiliation - Group Being part of an organized action group; Satisfaction in functioning together. (Reserved for face-to-face type of group membership—not for large masses or for affiliation to institutions.) (Student Council) "The experience of being active in student gov't with other students." (Junior Play Practice) "The class worked together as a group which I enjoyed very much."
30. Affiliation-Crowd Attachment to, or the immersion in, large groups; a "herd" feeling—no evidence of personal or face-to-face relationships. (Basketball) "I like the 'companionship' of mingling with the rest of the crowd."
31. Affiliation-School Awakening of a felt bond with the school; enjoyment of the pride and vigor of "school spirit." (Representative Council) "This gave me more of a feeling of belonging--Capital City High was more 'my' school." (Basketball) "I also enjoy going to away games because the school spirit is carried by everybody whether we are winning or losing."
32. Little Participation Opportunity to participate but report doesn't imply a very important participation. (Varsity Dances) "Let you participate in class functions." (Junior Class Meeting) "It gives you a chance to take part in different activities in school."
33. Have-a-Say Chance to say what one wants or thinks; having a vote included here. (School Election) "It made each student feel he had something to say about how he would be governed." (Cheerleader Tryouts) "I enjoyed the tryouts... because we, the student body, had a chance to pick the girls."
34. Supply-Work Appreciation of a place for supplies; or a place in which to work efficiently or pleasantly. (Library) "Besides, it is a lovely place to study before and after school." (Coaches' Room) "My like for dextrose and salt tablets is pretty strong. This is the only place... that I can obtain them."
35. Uplift Assistance toward higher moral or cultural values. Settings were sometimes said to provide appreciation of books or art, or to offer spiritual rewards. (Y-Teens) "... gave me spiritual strength for the day." (Wrestling) "I feel it makes a better man of me."
36. Points Extrinsic satisfaction through credits for attendance or service; a rare category but very clear. (Pep Club) "You get to build up points for honor pep or honor C." (Menninger Dinner) "I served at this dinner for extra credits in foods class."



- |                           |                                                                                                                                                                                                                                                                                                                                                                      |
|---------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 37. Milieu Knowledge      | Learning "who's who" or "what's what" within the school.<br>(Swimming) "I enjoyed this because I found out who was on the team."<br>(Regular Assembly) "They let everyone know what is going on about them."                                                                                                                                                         |
| 38. Psychological Release | Inner tensions relieved or put aside.<br>(Wrestling) "... a wonderful way to relieve tension without bad results."<br>(Pep Club) "... offers an opportunity to relax and enjoy things."                                                                                                                                                                              |
| 39. Others Get Value      | Any one of a variety of values mentioned but phraseology implies that the person writing the answer is not the person obtaining the value. (The units in this category were not used in most comparisons.)<br>(Basketball Games—by Capital City girl) "They are good exercise for the boys and it gives them encouragement when people are yelling for them to win." |
| X No Unit                 | A plus setting identified but satisfactions not described.<br>(Not used in any comparison.)<br>(Homecoming Parade) "... followed in car, full distance."                                                                                                                                                                                                             |

### Results

On various reliability checks, two coders assigned satisfaction units to the same category with 80 to 85 per cent agreement. The basic results of the coding analyses are given in Table 7.1. The frequencies in this table are the number of subjects who reported at least one satisfaction in the stated category.

In Table 7.1, Categories 1 through 31 are grouped into seven clusters for ease of understanding and interpretation. Categories 32 through 39 represent miscellaneous kinds of units which appeared infrequently. The common thread in each cluster may be defined as follows:

Competence cluster (categories 1-4): the student reported some kind of capacity maintenance or improvement achieved through his experience in the setting. The Competence cluster was reported most frequently by Juniors in the small Midwest County schools.

Learn-About cluster (categories 5-9): deals with learnings which are more in the nature of new awareness than of capacity improvement. Juniors from the



large and small schools reported the Learn-About cluster with about equal frequency.

Big Action and Test cluster (categories 10-14): identified satisfactions derived from having participated in the challenging aspects of a setting or group; having met the test. In many protocols references to meeting the test and to the importance or largeness of one's contribution appeared together. That is, a Junior would report that helping to put on an affair was a challenge and that it also gave him a feeling of making a significant contribution to his school or class. Small school Juniors reported satisfactions in the Big Action and Test cluster more frequently than did large school Juniors.

Novelty cluster (categories 15-18): refers to aspects of novelty or escape from the usual. This cluster was employed with similar frequency by large and small school Juniors.

Vicarious Enjoyment cluster (categories 19-21): the basic idea here is "observer satisfaction," often derived from witnessing events. Large school Juniors most often reported satisfactions in this cluster.

Valence cluster (categories 22 and 23): these two categories are similar in that they deal with a rather general liking for a setting. Liking for the action in a setting (Action Valence) was a small school satisfaction, while unspecified liking was equally divided between the student populations.

Social Rewards cluster (categories 24 - 31): these have been grouped together because they refer to pleasures of sociality. However, inspection of the data suggests that different types of social satisfactions were enjoyed by the large and small school groups. While Support from Adults (category 25) and Informal Affiliation (28) appeared with similar frequency, small school Juniors reported more Support from Others (26), Being Valued (27), and Action Group Affiliation (29). Large school Juniors, on the other hand, reported enjoyments of belonging to the mass (30) or institutional (31) entities of crowd and school (Crowd and School Affiliation).

Table 7.1 Number of Juniors reporting one or more units of satisfaction designated categories

| No. | Label                                    | Midwest<br>County<br>Juniors | Capital<br>City<br>Juniors | P Value<br>(Chi Square<br>Yates) | Group Using<br>Category Most<br>Frequently |
|-----|------------------------------------------|------------------------------|----------------------------|----------------------------------|--------------------------------------------|
| 1.  | Physical Competence                      | 11                           | 2                          | .05                              | M                                          |
| 2.  | Emotional Competence                     | 10                           | 0                          | .01                              | M                                          |
| 3.  | Social Competence                        | 11                           | 2                          | .05                              | M                                          |
| 4.  | Skill Competence                         | 5                            | 0                          | *                                | M                                          |
| 5.  | Learn About-Social                       | 10                           | 10                         |                                  |                                            |
| 6.  | Learn About-Skill                        | 7                            | 3                          |                                  |                                            |
| 7.  | Learn About-Cognitive                    | 13                           | 13                         |                                  |                                            |
| 8.  | Learn About-Vague                        | 8                            | 7                          |                                  |                                            |
| 9.  | Learn About-Future                       | 10                           | 9                          |                                  |                                            |
| 10. | Challenge                                | 24                           | 4                          | .001                             | M                                          |
| 11. | Competition                              | 17                           | 3                          | .01                              | M                                          |
| 12. | Success                                  | 15                           | 2                          | .01                              | M                                          |
| 13. | Contribution                             | 23                           | 14                         |                                  |                                            |
| 14. | Big Participation                        | 13                           | 7                          |                                  |                                            |
| 15. | New Experience                           | 13                           | 13                         |                                  |                                            |
| 16. | New People                               | 20                           | 13                         |                                  |                                            |
| 17. | Escape                                   | 13                           | 10                         |                                  |                                            |
| 18. | Something-to-do                          | 5                            | 6                          |                                  |                                            |
| 19. | Competition Vicarious                    | 10                           | 20                         | .10                              | CC                                         |
| 20. | Excitement                               | 9                            | 20                         | .05                              | CC                                         |
| 21. | Vicarious Valence                        | 25                           | 47                         | .01                              | CC                                         |
| 22. | Action Valence                           | 47                           | 26                         | .01                              | M                                          |
| 23. | Unspec. Valence                          | 31                           | 29                         |                                  |                                            |
| 24. | Indicate Support                         | 11                           | 15                         |                                  |                                            |
| 25. | Support from Adults                      | 3                            | 3                          |                                  |                                            |
| 26. | Support from Others                      | 5                            | 0                          | *                                | M                                          |
| 27. | Be Valued                                | 14                           | 3                          | .02                              | M                                          |
| 28. | Informal Affiliation                     | 22                           | 28                         |                                  |                                            |
| 29. | Action Group Affiliation                 | 23                           | 3                          | .001                             | M                                          |
| 30. | Crowd Affiliation                        | 3                            | 8                          |                                  |                                            |
| 31. | School Affiliation                       | 3                            | 18                         | .01                              | CC                                         |
| 32. | Little Participation                     | 2                            | 4                          |                                  |                                            |
| 33. | Have-a-Say                               | 2                            | 11                         | .05                              | CC                                         |
| 34. | Work & Supply Places                     | 5                            | 6                          |                                  |                                            |
| 35. | Uplift                                   | 10                           | 2                          | .05                              | M                                          |
| 36. | Points                                   | 0                            | 5                          | *                                | CC                                         |
| 37. | Milieu Knowledge                         | 1                            | 10                         | .02                              | CC                                         |
| 38. | Psychological Release                    | 4                            | 11                         |                                  |                                            |
| 39. | Others Get Satisfaction                  | 7                            | 5                          |                                  |                                            |
| X   | Selected Good Settings<br>Without a Unit | 2                            | 10                         |                                  |                                            |

\*Low frequency categories used exclusively by one population.

The miscellaneous, infrequently used categories from 32 to 39 yielded some suggestive comparisons. The Uplift satisfaction (35) came predominantly from small school students; typical of large school Juniors were: the chance to Have-a-Say in school affairs (33), to get information about what goes on in the school (37), and to accumulate Points (36).

Following is a summary of the major differences between small and large schools in the use of clusters and categories:

Satisfactions more frequent in the small schools were:

- Competence
- Big Action and Test
- Action Valence
- Group Action
- Be Valued
- Uplift

Satisfactions more frequent in the large school were:

- Vicarious Enjoyment
- Large Entity Affiliation (Crowd and School)
- Milieu Knowledge
- Points

Frequently reported satisfactions which seemed of similar importance in large and small schools were:

- Learn-About
- Novelty
- Informal Affiliation
- Unspecified Valence

These findings indicate that there were marked differences in the kinds of satisfactions reported by matched groups of large and small school Juniors. The relevance of these differences to the theory of undermanned behavior settings is the next concern.

#### Discussion in Terms of Theory

It has been predicted that when conditions produce undermanned behavior settings, forces result which invite and press participants to engage in more difficult, more responsible, more central tasks. It has already been established

that small school students, in comparison with large school students, participated in relatively undermanned settings within the school, and occupied performance positions more frequently. The question at issue is whether the experiences of small school Juniors were those which might be predicted from the theory.

Specific predictions from the theory of undermanned behavior settings are delineated on pages 27 through 31 of Chapter 2. These predictions are numerous and interrelated; at this point it is pertinent to restate a few which seem relevant to the data at hand, and to juxtapose the findings reported above. Three of the predictions are stated in behavioral terms together with their phenomenal counterparts as reported in the satisfaction of the subjects.

Undermanned, i.e., small school behavior settings in comparison with large school settings resulted in:

1.2 Inhabitants engaging in more difficult and more important tasks.

Small school Juniors reported the satisfaction cluster Big Action and Test more frequently than large school Juniors; this suggests that small school students had more demanded of them in settings. Specifically, the data on Challenge and Competition seem to reflect the fact that small school students experienced more feelings of satisfaction going with hard work and with demanding tests of ability.

3.1 Inhabitants enjoying greater functional importance, and

3.2 ... more responsibility.

In an overall way, the greater use of Big Action and Test by small school Juniors suggest satisfactions arising out of functional importance and responsibility. Specifically, there were strong trends for small school Juniors to employ the categories of Contribution and Big Participation. On the other hand, large school Juniors emphasized satisfaction commensurate with low functional importance and low responsibility; this group emphasized the onlooker satisfactions of the Vicarious Enjoyment cluster.

Results in the Social categories suggest that the small school students experienced satisfactions congruent with their functional importance, while the large school students experienced more rewards of "herd association." Small school Juniors were impressed with the pleasures of being a part of an organized action group (invariably a face-to-face group), while large school students reported the satisfactions of being a part of a crowd or school.



Superficially, the large school students' emphasis on the category Have-a-Say seems to indicate that they experienced some importance in their settings. However, the Have-a-Say category usually arose from being one of hundreds of students to vote in an election. A reasonable inference is that the Have-a-Say emphasis meant that large school Juniors felt they lacked importance and control in most settings and that they appreciated those settings which offered the minuscule control of a vote.

### 3.6 Inhabitants experiencing more occurrences of success and failure.

The categories Success and Be Valued both related to frequency of success experiences. (The category Be Valued refers to honors and awards that result from success.) Small school Juniors reported such satisfactions much more often than did large school Juniors.

Three category comparisons have not yet been discussed: Uplift, Points and Milieu Knowledge. The fact that small school Juniors emphasized Uplift suggests no compelling hypotheses to the investigators.

The superiorities of the large school on the Points and the Milieu Knowledge categories do seem capable of interpretation. The point system exists in both the large and small schools. It is a device to encourage students to participate in activities which might not be attractive enough without such an extrinsic reward. It is speculated that small school students were satisfied enough by intrinsic rewards to ignore the points issue. Support for this notion is offered in Chapter 8, where it is demonstrated that students in the small schools reported greater numbers of attractions (own forces) toward participation in behavior settings than did students in the large school. A few of the large school students, however, failing to achieve significant intrinsic rewards, may have reported the points as one thing they did get out of the setting.

The interest of large school students in Milieu Knowledge seems to point to the complexity of the larger organization and to the partial lack of awareness of its inhabitants about important persons and affairs. Because of the relative incomprehensibility of the larger milieu, its students appear to have appreciated those settings (often assemblies) where they learned such things

and what were the clubs available. It seems reasonable to suppose that Milieu Knowledge relates to the size issue via the complexity of the total milieu, rather than the size of the particular setting for which the satisfaction was reported.

The preceding emphasis on differences between schools should not obscure the fact that comparisons of setting satisfactions also revealed some similarities. Both groups frequently used their nonclass settings for Novelty and Escape, and for Informal Affiliation. However, these seem to be rewards that are available to occupants of any position in a setting. Contrasts occurred most frequently for those categories where peripheral or central positions might be expected to make a difference. The small school students most frequently occupied performance (central) positions; they emphasized satisfactions related to competence, activity, self-testing, and face-to-face action groups. Large school students more frequently occupied nonperformance (peripheral) positions; they emphasized satisfactions related to passive observance and to belonging to large or mass entities.

#### A Descriptive View of Large School—Small School Comparisons

For those interested in a comparison of the two groups without clustering of categories and theoretical ordering, the data on Table 7.2 are descriptive. In this table, satisfaction categories are placed in order from those more "favored" by the small school Juniors to those more "favored" by the large school Juniors.

Two comparisons can complete this description of differences in satisfactions. Compared to the large school Juniors, small school Juniors tended to report more units ( $p < .10$ ); and what is more significant, the small school students used more different categories to describe their satisfactions ( $p < .01$ ). The latter finding can be expressed another way: compared to students of the large school,

their participation in the nonclass school settings.

Table 7.2 Difference in number of students reporting stated categories of satisfaction ( $N_{Mid.} - N_{Cap. C.}$ ).

The amount of the difference is expressed as per cent of 88 (the number of subjects in each group)

| <u>Category Number</u> | <u>Category Name</u>     | <u>Difference</u> |
|------------------------|--------------------------|-------------------|
| *22                    | Action Valence           | 24                |
| *29                    | Action Group Affiliation | 23                |
| *10                    | Challenge                | 23                |
| *11                    | Competition              | 16                |
| 12                     | Success                  | 15                |
| 27                     | Be Valued                | 13                |
| 2                      | Emotional Competence     | 11                |
| 1                      | Physical Competence      | 10                |
| 3                      | Social Competence        | 10                |
| *13                    | Contribution             | 10                |
| 35                     | Uplift                   | 9                 |
| *16                    | New People               | 8                 |
| 14                     | Big Participation        | 7                 |
| 4                      | Skill Competence         | 6                 |
| 26                     | Support from Others      | 5                 |
| 6                      | Learn-About Skill        | 4                 |
| 17                     | Escape                   | 3                 |
| *23                    | Unspecified Valence      | 2                 |
| 8                      | Learn-About Vague        | 1                 |
| 9                      | Learn-About Future       | 1                 |
| 5                      | Learn-About Social       | 0                 |
| 7                      | Learn-About Cognitive    | 0                 |
| 15                     | New Experience           | 0                 |
| 25                     | Support from Adults      | 0                 |
| 18                     | Something-to-Do          | -1                |
| 34                     | Work and Supply Plans    | -1                |
| 32                     | Little Participation     | -2                |
| 24                     | Indicate Support         | -4                |
| 30                     | Crowd Affiliation        | -6                |
| 36                     | Points                   | -6                |
| *28                    | Informal Affiliation     | -7                |
| 38                     | Psychological Release    | -8                |
| 37                     | Milieu Knowledge         | -10               |
| 33                     | Have-a-Say               | -10               |
| *19                    | Competition Vicarious    | -11               |
| *20                    | Excitement               | -13               |
| *31                    | School Affiliation       | -17               |
| *21                    | Vicarious Valence        | -25               |

\*Category reported by 20 per cent or more of the subjects of the group which most frequently reported the category.

Discussion thus far has demonstrated that small school Juniors reported a satisfaction pattern quite different from that reported by large school Juniors. It has also been established that small school Juniors more frequently engaged in active, important, responsible positions in their settings (Chapter 6). The remainder of this report will test the hypothesis that these differences in position within settings determined the school differences in satisfaction patterns.

The approach to the test of the hypotheses was twofold. The first question was whether individuals reported different satisfactions from peripheral than from central behavior setting positions. The second question was whether control of setting position would diminish or eliminate the difference in satisfaction patterns between large and small schools. Thus, analysis of the causal relationship of setting position to satisfaction pattern involved two steps: first, effects of degree of penetration were tested with school size held constant; secondly, effects of school size were tested with degree of penetration held constant.

#### Satisfactions and Behavior Setting Position (School Size Constant)

The matched samples of 88 students from the large and small schools served as subjects. As might be expected from the data on performances, a relatively small number of large school students described satisfactions from settings in which they had occupied central positions. Thirty-seven students who had relatively high performance rates were added to the Capital City sample in order to make it possible to compare satisfactions from all performance levels in that school.<sup>2</sup> Although the addition of these subjects resulted in a Capital City

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<sup>2</sup>These subjects filled out satisfaction report forms at the time of the initial survey and under the same conditions as the 88 matched subjects.



since comparisons were made between levels of performance within schools and between schools at the same level of performance.

It will be recalled that Chapter 6 (p. 93) discussed setting positions in detail. Level One included audience persons and relatively inactive group members (play attender, stamp club member); Level Two referred to participators in active group endeavors (member of intramural team); Level Three included low level performers (pep club member); and Level Four was reserved for those who had penetrated the setting most deeply (proctors, cheerleaders, varsity team members, etc.). In the following comparisons of setting positions, Level One is the Peripheral Position, Levels Two and Three combined form the Middle Position, and Level Four is the Central Position.

The satisfaction categories compared were those which had yielded significant differences between the large and small school students and which were used with reasonable frequency by at least one of the school groups. The first comparison determined for each school group and for each of the three positions, the percentage of total units which fell in a given satisfaction category. All subjects were used in this comparison; results are given in Table 7.3.

If position centrality within behavior settings determined kinds of satisfactions in accordance with the hypothesis (p. 116), categories 1 through 5 in Table 7.3 should show increasing proportions from peripheral to central positions; categories 6 and 7 should show decreasing proportions. With the minor exception of category 4 (Group Action) in Capital City, the expected patterns were quite general for both school groups.

While the picture that satisfactions followed setting position is quite clear from Table 7.3, the data suggest that the school size groups emphasized particular satisfactions to different degrees at the same setting position. For example, Competence was emphasized more at the central position by small school

Table 7.3 Satisfaction reported by Midwest County and Capital City Juniors in relation to centrality of position. Proportion of all satisfactions at a given position which fell into various categories

| Satisfaction Cluster Category | Peripheral Positions | Middle Positions | Central Positions |
|-------------------------------|----------------------|------------------|-------------------|
| 1. Competence                 |                      |                  |                   |
| Capital City                  | .01                  | .03              | .05               |
| Midwest County                | .02                  | .08              | .13               |
| 2. Big Action and Test        |                      |                  |                   |
| Capital City                  | .03                  | .09              | .26               |
| Midwest County                | .03                  | .23              | .30               |
| 3. Action Valence             |                      |                  |                   |
| Capital City                  | .04                  | .10              | .13               |
| Midwest County                | .07                  | .16              | .16               |
| 4. Group Action               |                      |                  |                   |
| Capital City                  | .01                  | .01              | .01               |
| Midwest County                | .02                  | .04              | .08               |
| 5. Be Valued                  |                      |                  |                   |
| Capital City                  | .00                  | .03              | .02               |
| Midwest County                | .01                  | .04              | .04               |
| 6. Vicarious Enjoyment        |                      |                  |                   |
| Capital City                  | .27                  | .16              | .04               |
| Midwest County                | .17                  | .10              | .04               |
| 7. Big Affiliation            |                      |                  |                   |
| Capital City                  | .08                  | .04              | .01               |
| Midwest County                | .03                  | .01              | .00               |

Juniors than by large school Juniors, while Big Affiliation was more heavily employed at the peripheral position by large school Juniors than by small school Juniors.

The significance of the differences appearing in Table 7.3 were not testable since satisfactions rather than persons were the basic units. In order to make statistical tests of the differences, a method in which each subject served as his own control was used. Subjects were selected from both school groups who reported satisfactions from at least two different behavior setting positions. For each subject, the analysis determined whether a larger proportion of units of a given satisfaction category were reported for peripheral or central setting positions. For example, a student might report two Vicarious Enjoyment units from two peripheral positions, no Vicarious Enjoyment units from one middle position, and one Vicarious Enjoyment unit from two central positions. For this subject, Vicarious Enjoyment was most heavily emphasized for the most peripheral position. (A very few cases reported an equal proportion of units in all three positions, or the greatest proportion in the middle position; these cases were considered ties, or "no case.") Probability tests were based on the Sign test of the significance of frequency of direction. Table 7.4 reports the results of this analysis.

Data in Table 7.4 suggest that when units were employed with enough frequency to test, setting position affected reported satisfactions. Inspection of the data indicates that those clusters of satisfactions related to involvement, action, challenge, and test were associated with the more central setting positions, while satisfactions related to onlooking, watching, and "herd association," were associated with the more peripheral setting positions.

satisfaction reported by Juniors who occupied both  
peripheral and central behavior setting positions

| Satisfaction Cluster<br>or Category | Number Giving<br>Most Units in More<br>Peripheral Positions | Number Giving<br>Most Units in More<br>Central Position | p<br>(Sign Test) |
|-------------------------------------|-------------------------------------------------------------|---------------------------------------------------------|------------------|
| 1. Competence                       |                                                             |                                                         |                  |
| Capital City                        | 3                                                           | 4                                                       |                  |
| Midwest County                      | 1                                                           | 20                                                      | .001             |
| 2. Big Action and Test              |                                                             |                                                         |                  |
| Capital City                        | 4                                                           | 24                                                      | .001             |
| Midwest County                      | 3                                                           | 41                                                      | .001             |
| 3. Action Valence                   |                                                             |                                                         |                  |
| Capital City                        | 9                                                           | 19                                                      | .05              |
| Midwest County                      | 9                                                           | 25                                                      | .01              |
| 4. Group Action                     |                                                             |                                                         |                  |
| Capital City                        | 1                                                           | 1                                                       |                  |
| Midwest County                      | 2                                                           | 17                                                      | .001             |
| 5. Be Valued                        |                                                             |                                                         |                  |
| Capital City                        | 0                                                           | 3                                                       |                  |
| Midwest County                      | 1                                                           | 9                                                       | .02              |
| 6. Vicarious Enjoyment              |                                                             |                                                         |                  |
| Capital City                        | 28                                                          | 7                                                       | .001             |
| Midwest County                      | 22                                                          | 6                                                       | .02              |
| 7. Big Affiliation                  |                                                             |                                                         |                  |
| Capital City                        | 8                                                           | 4                                                       |                  |
| Midwest County                      | 3                                                           | 0                                                       |                  |



The previous comparisons indicated that behavior setting positions were associated with similar satisfaction patterns in both large and small schools. The next step in testing the contribution of setting position to the differences in the pattern of satisfactions in the large and the small schools was to compare satisfactions between large and small schools when the small schools' superiority with respect to position centrality was controlled. A simple device was used: comparison of satisfactions between the school size groups for peripheral, middle and central behavior setting positions. To accomplish this, separate analyses for school size were calculated within each of the behavior setting positions.

Table 7.5 Number of behavior settings reported by large and small school Juniors in which they participated at peripheral, middle, and central positions

| School Group   | Peripheral Positions | Middle Positions | Central Positions |
|----------------|----------------------|------------------|-------------------|
| Capital City   | 278                  | 70               | 41                |
| Midwest County | 114                  | 54               | 109               |

Data in Table 7.5 indicate that Capital City students reported their satisfactions in connection with many more settings in which they held peripheral positions, and that Midwest County did this for many more settings in which they held central positions. Since the number of positions reported influences the number of satisfactions reported, it was necessary to use the following controls in the analyses of peripheral and central positions: (a) one analysis compared large and small school students who reported very few settings in which their participation was peripheral or central; and (b) a second analysis compared large and small school students who reported several settings in which they participated at a peripheral or a central position (no such control was necessary in the middle position where position frequency was similar).

If no significant differences emerged between schools for any setting position, this would indicate that the differences between schools rested exclusively upon the differences in setting position occupied by students. If significant differences emerged, this would not be evidence that centrality of position was not a factor in satisfaction; the importance of setting position has already been demonstrated. Such a result would rather indicate that other factors, beyond behavior setting position, contributed to the satisfaction differences which emerged when large and small schools were compared.

Table 7.6 Significance of differences in satisfactions derived by Capital City versus Midwest County Juniors when setting positions were similar<sup>a</sup>

| Kind of Satisfaction   | Peripheral Positions    | Middle Positions        | Central Positions           |
|------------------------|-------------------------|-------------------------|-----------------------------|
| 1. Competence          | /                       | NS                      | NS/NS                       |
| 2. Big Action and Test | NS/NS                   | Mid. > Cap. C.<br>.10   | NS/NS                       |
| 3. Action Valence      | NS/NS                   | NS                      | NS/NS                       |
| 4. Group Action        | NS/                     | Mid. > Cap. C.<br>p=.10 | Mid. > Cap. C.<br>p=.02 /NS |
| 5. Be Valued           | /                       | NS                      | /NS                         |
| 6. Vicarious Enjoyment | NS/NS                   | NS                      | NS/                         |
| 7. Big Affiliation     | Cap. C. > Mid.<br>p=.10 | /NS                     |                             |

<sup>a</sup>Each entry under peripheral and central positions includes two results; the one on the left is for subjects who reported few participations at the stated position, the one on the right is for subjects who reported several. Where no results are reported, frequencies were not high enough to be tested.

Table 7.6 displays results of the 26 comparisons for which there were sufficient data for statistical tests. It will be noted that only one of these 26 reached statistical significance of .05 or better. In general, it is quite clear that the obtained differences in satisfaction patterns between school

groups did not appear when the variable of setting position was held constant, and when results were controlled for frequency of report. Most of the school size differences in satisfactions can be explained by reference to the degree to which large and small school students occupied different behavior setting positions.

The major exception to this general conclusion occurred on Group Action; there was evidence that the small school students reported more of this "teamwork pleasure." It may be that the smaller settings in Midwest County encouraged more comradeship in work and competition. It is possible that the larger settings in Capital City made it more difficult for even performers to feel togetherness in action.

A trend for Big Affiliation to be a large school satisfaction can be attributed to the greater difficulty a student experiences in feeling that he is a part of his school. Because the school presents so many different persons at many dispersed places, it may be difficult to encompass the school psychologically. If this speculation is correct, large school students would be particularly appreciative of those settings in which school unity and spirit were deliberately emphasized. It was true that such satisfactions were always mentioned in connection with all-school assemblies, rallies and athletic events. Such settings have the potential for encouraging the feeling of belonging to the massive and "powerful" institution.

#### Summary

It was hypothesized that small and large school Juniors would report different kinds of satisfactions from their experiences in the nonclass behavior settings of school. This hypothesis was confirmed. Specifically, Juniors from the small schools reported more satisfactions relating to competence development, to challenge and big action, to group action and to "uplift" values; large school Juniors reported more satisfactions dealing with vicarious enjoyment, with large entity affiliation, with learning about their school's persons and affairs, and with gaining "points" via participation.



It was further hypothesized that the school differences in satisfactions were causally related to differences in the extent to which Juniors occupied central positions in school settings. It was possible to show that when Juniors in both large and small schools occupied the more central positions, they emphasized satisfactions of big action and test, of action valence and they de-emphasized vicarious pleasures. The expected emphasis upon competence development when in a more central position was confirmed for the small school Juniors but appeared only as a slight trend in the larger milieu. Thus, there was considerable evidence for the prediction that satisfactions obtained in school settings were significantly influenced by the positions occupied within the settings.

The final question was whether the obtained differences in satisfactions between large and small school Juniors would emerge if the variable of setting position was not permitted to function. It was found that most of the tested differences in large and small school satisfactions did not occur when differences in setting position and in the number of settings reported were held constant.

The burden of the evidence reported, then, supports the conclusions that large and small school Juniors derived different satisfactions from their non-class behavior settings and that these differences were causally related to differences in the number of students who occupied more central, important positions and the number of such positions held by each student.

The present investigation was directed toward differences in satisfactions. It was also true that Juniors from the large, as well as from the small, schools enjoyed many satisfactions of learning, of social interaction and of novelty. The nonclass settings of both kinds of schools evidently provided many significant rewards.

The question might be raised: Which school size provides the "better" nonclass experiences for its Junior inhabitants? To the extent that one believes that the satisfactions related to competence, challenge, activity and group affiliation are better than those related to vicarious enjoyment and to large entity affiliation—to this extent, small school Juniors reported better experiences than did large school Juniors.



## CHAPTER 8

### Forces toward Participation in Behavior Settings of the Large and Small Schools

Edwin Willems

The research reported in this chapter investigates certain relations between the school environments of students and their behavior and experience. The environment under investigation, as in the other studies, is the preperceptual, ecological environment, subject to laws of organization which are different from the laws which govern the unique, individual persons who inhabit the environment. A theory of these relations is presented in Chapter 2. In contrast to the studies reported in Chapters 6 and 7, this investigation (a) tests the theory at the level of experienced forces toward participation; (b) tests the experiences of different kinds of students; and (c) investigates the relationship between reported forces and actual behavior in the form of participation in behavior settings.

In Chapter 1 it is pointed out that one of the dilemmas facing the ecological side of psychology is the problem of the psychological person and his concurrent linkages with both inside and outside parts. The present investigation pursues just such a problem, i.e., the extent to which the experience of forces toward participation in behavior settings is determined by the ecological context in which the person finds himself, and to what extent by the "type of person" he is.

Special terms that are central to the research are defined briefly below:

Behavior setting: defined and characterized in Chapter 2; the terms behavior setting and setting are used interchangeably.

School: a contiguous, bounded set of interrelated behavior settings corresponding, in general, to the usual lay perception of a school.

Population: the number of students in a school.

Differentiation: the number of behavior settings in a school.

P/D ratio: population of a school divided by its differentiation. P/D ratio is the number of persons available per behavior setting in a school, on the average.

Participation: participation in the standing behavior pattern of a setting at some level. The terms entry and participation are used interchangeably.

Force: a concept in Lewinian field theory, defined as a "tendency to change," with the conceptual properties of direction, strength, and point of application (Lewin, 1951; Lewin, 1938). Certain empirical "symptoms," i.e., tendencies toward behavioral changes, may be coordinated to the concept (Lewin, 1938). For example, with reference to the behavior setting, Junior Play, a student might say, "My mother urged me strongly to go to the play." This statement reports that (a) at a particular point of application ("me"), (b) there was a tendency to change ("go"), (c) in a certain direction ("to the play"), (d) with a designated strength ("strongly"). In this report, the term force is used interchangeably to denote the theoretical concept and the experiential symptoms of forces.

Lewin (1951, p. 260) differentiated among three kinds of forces: (a) own forces, corresponding to the wishes, will, and needs of the person himself, attractions; (b) induced forces, arising from the wishes and wills of some other person or persons; and (c) impersonal forces, arising from the impersonal environment. Here, induced and imperscnal forces are combined into one class of foreign forces or pressures.

#### Derivation of Hypotheses

The full development of the following statements is contained in Chapter 2 and elsewhere (Willems, 1962); the statements represent a recasting of theory in terms of the concepts and methods of the present study.

### Background

Persons, as the crucial media of behavior settings, are subject to the forces which bound and organize the settings, and also act as agents of forces on other persons. When the manpower of a setting diminishes relative to its manpower requirements, without a corresponding lowering of its level of functioning, the following effects will obtain in terms of life space conceptualization:

- (a) There will be an increase in the number of opportunities (goals, valent regions) per remaining person; the inhabitants will, therefore, experience a greater number of forces toward the direct, consummatory use of the setting. These are own forces, in Lewin's terms.
- (b) There will be fewer persons relative to the manpower required to maintain the setting, and there will be more jobs per person; individuals will, therefore, experience a greater number of forces leading indirectly toward the consummatory use of the setting opportunities via maintenance of the setting. These are setting-maintenance forces. The direction of these forces is determined by their structural relation to the goals of the setting inhabitants.
- (c) There will be more effort to encourage, persuade, and require others to participate in the setting as one way of maintaining it. Inhabitants will, therefore, experience a greater number of induced forces toward participation.
- (d) There will more often be incompleteness, or threatened incompleteness, of the setting which can be alleviated only by participation, e.g., lack of a quorum, absence of an essential performer; inhabitants will, therefore, experience a greater number of impersonal forces corresponding to the perception of such incompleteness.

Setting-maintenance forces are one source of induced forces, and they are closely related to impersonal forces. For this reason, setting-maintenance, induced, and impersonal forces are grouped together and termed foreign forces. The predictions below are stated in terms of own and foreign forces.

In the statistical analyses, forces are treated in terms of their number, while the theory in Chapter 2 treats ~~forces~~ in terms of their range and strength. It is assumed that the number of forces reported by a person is one index of the strength of the resultant force acting upon him. The truth of this assumption is investigated below by way of the relationship between numbers of forces and actual behavior.



These notions about the effects of behavior setting population may be extrapolated to the level of schools. If schools of low and high P/D ratio are compared, the relative numbers of forces acting on individuals in the schools will correspond to the argument above, since the schools with the low as compared to high P/D ratio have fewer persons per behavior setting, on the average, to mediate the same opportunities and obligations (see Chapter 4).

In Chapter 3, where relevant studies are reviewed, it was found, in agreement with the theory, that size (population) of ecological units was a negative correlate of the range, frequency, and depth of individual involvement. Although several of the authors used the concept of attraction to explain their findings, none of the studies treated empirically the influence of size on own forces and foreign forces, and how these were correlated with actual behavior. This study will investigate these relationships.

The above statements are directly derived from the theory. The following statements, not derived from the theory, are propositions concerning two kinds of students.

Whatever the P/D ratio of a school, there will be students who are less attracted (experience fewer own forces) toward participation in the behavior settings of that school than other students who are more highly attracted (experience more own forces) toward participation in the school via its settings. The former students are called marginal students; the latter, regular students. Independent of the derivations from P/D ratios of schools, it is predicted that regular students will experience more own forces toward participation than marginal students, although it is expected that ecological conditions, as characterized by P/D ratio, will also act differentially on such students. The bases for identifying the regular and marginal students are given on page 135.



### Research Hypotheses

When two levels of school P/D ratio are varied against regular and marginal students, the following combination of variables results:<sup>1</sup>

|                  |      | School Size Variable |               |
|------------------|------|----------------------|---------------|
|                  |      | Small                | Large         |
| Student Variable | Reg  | Small<br>Reg         | Large<br>Reg  |
|                  | Marg | Small<br>Marg        | Large<br>Marg |

From the theory it is predicted that students from small schools, in comparison with students from large schools,

- 1.1 will report greater numbers of own forces: Small > Large
- 1.2 will report greater numbers of foreign forces: Small > Large
- 1.3 will report greater numbers of responses reflecting responsibility to behavior settings, or to persons who inhabit them: Small > Large<sup>2</sup>
- 1.4 will more often expect to participate in a behavior setting which has not yet occurred: Small > Large

Although the theory does not treat the comparative importance of own and foreign forces, it is predicted that due to (a) diminished available manpower, (b) the consequent increased importance of each person in maintaining the settings, and (c) the increased induction of forces on persons toward participation, students from small schools, in comparison with students from large schools,

- 2.1 will report greater proportions of foreign forces to total forces: Small > Large
- 2.2 will place more importance on foreign forces: Small > Large

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<sup>1</sup>Since Chapter 4 has demonstrated a direct relationship between school size and P/D ratio, Small and Large will denote schools with low and high P/D ratios, respectively. Reg and Marg will denote regular and marginal students, respectively.

<sup>2</sup>The theoretical argument for this prediction is discussed in Chapter 2 (p. 29, Derivation 3.2).

On the basis of the definition of regular and marginal students, regular students, in comparison with marginal students,

3.1 will report greater numbers of own forces:  $\text{Reg} > \text{Marg}$

3.2 will not report greater numbers of foreign forces:  
 $\text{Reg} = \text{Marg}$

Due to the effects of P/D ratios on total forces and the effects of types of students on own forces, it is predicted that regular students from small schools will report the most forces, and that marginal students from large schools will report the fewest. The following prediction of order among the cells of the diagram above will be tested:

4.0  $\text{Small-Reg} > \text{Small-Marg} > \text{Large-Reg} > \text{Large-Marg}$

#### Method

To test the predictions, data were secured from 40 subjects (10 per cell in the diagram) in the form of reports of their experiences of forces toward entry into several classes of behavior settings in their respective schools: (a) five actual settings, i.e., settings that had already occurred and that were equivalent across the schools; (b) a hypothetical setting, which had not occurred, and therefore, which no one had entered; and (c) a most meaningful setting, chosen by each subject as having been most attractive and worthwhile to him. Data on reported forces were then correlated to actual participation.

#### Choice of Schools

To provide the school size variable, five of the northeast Kansas High schools involved in the other studies were chosen. Representing the size variable were four small schools with an average P/D ratio of 1.17 (Walker, Malden, Midwest, and Vernon), and one large school (Capital City) with a P/D ratio of 4.58, i.e., roughly four times larger than the average P/D ratio of the small schools. Table 4.3 in Chapter 4 provides the detailed population and differentiation data for the schools.

### Choice of Subjects

From a review of the literature on the identification and prediction of high school dropouts (Willems, 1960), and drawing especially on a study by Thomas (1954), a cluster of five variables was chosen which appear to be predictive of a tendency to drop out of high school. These variables are IQ, academic performance, occupation of father, education of father, education of mother. They were dichotomized and weights of "1" and "2" were assigned to upper (regular) and lower (marginal) sides of each dichotomy, respectively, to provide an operational definition of regular and marginal students, under the assumption that "potential dropouts" represent marginal students, i.e., students with low "own forces." Appendix 8.1 shows the five variables and conventions followed in dichotomizing them. Data on these variables were obtained for Juniors in the chosen schools, and appropriate weights were assigned to each variable for each subject.

The minimal weighted score, summed across the five variables for a subject, was five, and the maximal was ten. To identify pools of regular and marginal students, (a) students with summed scores of six and below, and with a value of one for IQ or academic performance, were defined as regular students; and (b) students with summed values of eight and above, and with a value of two for IQ, were defined as marginal students.

Sampling was performed by collecting pools of identified subjects for each cell in the research design, separating sexes within pools, assigning serial numbers to subjects, and sampling, without replacement, five males and five females per cell. The control for sex was followed after sex differences in rates of participation in behavior settings were found as reported in Chapter 6.

### Choice of Behavior Settings

Behavior setting surveys made in the other studies (see Chapter 4) yielded data on the exact behavior settings available to the subjects.



For reports regarding experiences with actual settings, five settings were chosen, each of which (a) had a counterpart of the same variety in all the schools; (b) had occurred prior to the gathering of data; (c) was reasonably public, or salient; (d) was open to Juniors of both sexes; (e) was volitional (participation by choice); and (f) was extracurricular. Table 8.1 shows the five settings chosen for each school. All of the settings had occurred at least once during the period from September 1 through December 16, 1960, and are called the five actual settings. Subjects were asked to report their experiences of forces whether or not they had in fact entered the settings. One set of analyses dealt with the five settings regardless of entry; a separate analysis was subsequently performed on the settings entered among the five.

All School Banquet, which had not occurred in any of the schools, was chosen as a hypothetical setting, in terms of which each subject projected ahead his anticipated experience of forces toward participation.

The most meaningful behavior setting for each subject was the setting which, in the study reported in Chapter 7, he identified as being "especially good, satisfying, worthwhile—plus." Each subject reported forces toward participation in this setting, which maximized personal attraction, or own forces.

#### Procedures for Gathering Data

In standardized, individual interviews, the subjects were asked to think of the selected behavior settings and to report the forces they experienced toward entering the settings. Following appropriate background remarks (the settings were presented in terms of "activities"), two separate but parallel sets of data were gathered.

One set of data was obtained by recording the subjects' responses, for each setting, to the simple open-ended question, "What, if any, were ("would be" for the hypothetical setting) for you real reasons for or pulls toward attending this activity?" Units in these data were coded into own and foreign force responses.



Table 8.1 Five actual behavior settings in each school for which students reported forces toward entry

| School       | Behavior Setting Variety      |                                        |                              |                                       |                                  |
|--------------|-------------------------------|----------------------------------------|------------------------------|---------------------------------------|----------------------------------|
|              | Athletic<br>Contests, Indoors | Dances                                 | Plays, Concerts,<br>Programs | Volunteer<br>Work and<br>Fund Raising | Fairs, Carnivals,<br>Parades     |
| Malden       | Basketball Game,<br>Home      | Post-Game<br>Dance                     | Junior Play                  | Jrs. Sell<br>Magazines                | Pep Club Outdoor<br>Rally        |
| Midwest      | Basketball Game,<br>Home      | Post-Game<br>Dance                     | Junior Play                  | Jrs. Sell<br>Magazines                | Jr. Carnival and<br>Chili Supper |
| Vernon       | Basketball Game,<br>Home      | Homecoming<br>Dance                    | Junior Play                  | Jrs. Sell<br>Hats                     | Pep Parade                       |
| Walker       | Basketball Game,<br>Home      | Student<br>Council Post-<br>Game Dance | Junior Play                  | Jr. Car Wash<br>and Odd Jobs          | Band Parade and<br>Collection    |
| Capital City | Basketball Game,<br>Home      | Varsity<br>Post-Game<br>Dance          | "Your Show"                  | Jrs. Sell<br>Xmas Cards               | Homecoming Parade                |

Two independent coders obtained 84 per cent agreement on the placing of responses into specific categories. These operations yielded (a) the total number of force units, and (b) the number of own force units, and (c) the number of foreign force units. These data are called open-ended data. Appendix 8.2 shows examples of units coded as own and foreign forces. A separate content analysis tested these data as to their indication of responsibility to behavior settings or persons who occupied them.

After all of the open-ended data were secured from a subject, a parallel set of data was obtained by a modified Q sort of cards. These cards each contained a possible force toward entry into a behavior setting, e.g., "I was asked to go," "I like that activity," "I saw that activity needed people." The content of the cards was made as general as possible, and the cards were categorized as representing own or foreign forces before the gathering of data. Appendix 8.3 shows the card-sort items for the actual and hypothetical settings.

A sorting sheet with yes and no boxes was placed in front of the subjects. The subjects were asked to think of the settings, one at a time, and were told, "Take these cards, and if there are any among them that were (or "would be" for the hypothetical setting) for you real reasons for or pulls toward attending this activity, sort them into the yes box. Those that weren't, sort into the no box." Subjects were then instructed to rank the cards sorted yes in the order of importance.

These operations yielded (a) the total number of card responses which indicated forces toward entry into the settings, (b) the number of own, (c) the number of foreign forces and (d) their relative rank of importance. These data are called card-sort data. A replication after five days of the card-sort operation in a pilot study obtained 89 per cent agreement on the sorting of specific cards into the yes and no boxes, and 75 per cent agreement on the placing of foreign cards in the upper half of the ranks of importance. The agreement on the yes-no sorting was considered adequate; the agreement on the ranking was considered so low as to render the rank data only suggestive.

### Data and Analyses

The total number of forces toward entry, consisting of own and foreign forces, were determined for each individual, for the open-ended and the card-sort data, for each of the following classes of settings: (a) five actual settings, (b) settings entered, (c) hypothetical setting, and (d) most meaningful setting. For the five actual settings, scores were obtained by summing across the five settings. In the case of settings entered, the average frequency per entered setting was obtained.

Table 8.2 summarizes the classes of dependent variable data which were finally obtained. In the table, (a) "importance of foreign forces" denotes data on whether or not, in the card-sort procedure, foreign force cards constituted a majority of those in the upper half of the ranking according to importance; (b) "actual entry" designates data on whether or not the subject had in fact entered the settings; (c) "unequivocal yes" indicates data on whether or not subjects responded with a clear yes when asked if they would enter the hypothetical setting if it were to occur; and (d) "responsibility" denotes data on the extent to which subjects' responses indicated responsibility to the settings or persons who inhabited them. An X in the table indicates that such data were analyzed for a particular class of settings; the absence of an X indicates that either such data were not available, or no corresponding analysis was performed.

Statistical analyses were performed along the lines of the research hypotheses. Two-variable statistical procedures were employed on the data, in keeping with the two-by-two design of the research. When the data met the assumption of homogeneity of variance, analysis of variance procedures were used. When this assumption was not met, the data were split at the overall median, frequency counts were made for the various cells, and the Sutcliffe multi-variable chi square procedure was used (Sutcliffe, 1957).

Table 8.2 Classes of data on which statistical calculations were performed (see p. 139)

| Classes of Data                | Types of Behavior Settings |                  |              |                 |
|--------------------------------|----------------------------|------------------|--------------|-----------------|
|                                | Five Actual                | Settings Entered | Hypothetical | Most Meaningful |
| Card-sort                      |                            |                  |              |                 |
| Total forces                   | X                          | X                | X            | X               |
| Own forces                     | X                          | X                | X            | X               |
| Foreign forces                 | X                          | X                | X            | X               |
| Proportion of foreign to total | X                          | X                | X            | X               |
| Importance of foreign forces   | X                          |                  | X            | X               |
| Open-ended                     |                            |                  |              |                 |
| Total forces                   | X                          | X                | X            |                 |
| Own forces                     | X                          | X                |              |                 |
| Foreign forces                 | X                          | X                |              |                 |
| Proportion of foreign to total | X                          | X                |              |                 |
| Actual entry                   | X                          | X                |              | X               |
| Unequivocal "yes"              |                            |                  | X            |                 |
| Responsibility                 | X                          |                  |              |                 |

The problem of the relationship between reported forces and actual behavior was investigated by means of correlations. Correlations were calculated between the number of settings actually entered among the five in the interview and (a) number of own forces, (b) number of foreign forces, and (c) total number of forces reported by the subject. The Spearman rank difference formula, corrected for ties, was employed.

Correlations were also calculated between reported forces and actual participation in the varieties of settings to which the five settings belonged. The data on participation were gleaned for the 40 subjects of this study from among



data in the investigation reported in Chapter 6. Separate Pearson product moment correlations were calculated between total, own, and foreign forces, on the one hand, and (a) number of performances, (b) number of nonperformance entries, and (c) total participation, i.e., performances and entries.

A third correlational approach was made to the following problem: The review of the literature (Chapter 3) revealed no studies which made a distinction between own forces and foreign forces; instead, size of ecological unit was related to a general category of forces often called "attractions." In order to investigate the differential correlations of own and foreign forces to behavior, separate correlations of own and foreign forces to actual behavior were studied in connection with the five actual settings.

#### Summary of Results

The various analyses which are given in the following section, Detailed Results, may be summarized by one stable and representative set of data: the responses to the open-ended question about forces toward participation in the five actual settings. Table 8.3 shows the mean total numbers of such reported forces by regular and marginal students in the small and large schools.

Table 8.3 Mean total numbers of forces toward participation in five behavior settings reported by subjects in four school-student groups

|                  |      | School Size Variable |       |       |
|------------------|------|----------------------|-------|-------|
|                  |      | Small                | Large |       |
| Student Variable | Reg  | 15.1                 | 11.2  | 13.15 |
|                  | Marg | 14.4                 | 5.9   | 10.15 |
|                  |      | 14.75                | 8.55  |       |

Analysis revealed the following differences:

School variable:  $F = 19.32$ ,  $p < .01$ , Small > Large

Student variable:  $F = 4.50$ ,  $p < .05$ , Reg > Marg

Interaction:  $F = 2.66$ ,  $p$  ns

The correlation between number of forces reported and number of behavior settings entered was .87, indicating a strong positive relationship between the number of forces reported and actual entrance and participation in behavior settings.

These data provide clear evidence that the small school students reported more forces than the large school students, that there was a tendency for regular students to report more forces than marginal students, that there is some inspectional evidence that the regular-marginal difference was greater in the large school than in the small schools, and that the order of the groups with respect to the number of reported forces was: small-regular, small-marginal, large-regular, and large-marginal.

Further analyses of the findings are shown in Figure 8.1, where total forces reported are divided into own and foreign forces. From the figure several findings stand out: (a) in the cases of both own and foreign forces, students from the small schools reported more forces than the large school students; (b) the differences are greater in foreign than in own forces; and (c) in the cases of both own and foreign forces, there was more difference between regular and marginal students in the large school than in the small schools. The large school marginals were a group apart, outsiders. Their reported experience of forces toward participation, their detached position suggest that large school students experience an ecology that is relatively more discriminating, or evaluative of kinds of students.

The above findings represent a prototype of all the major analyses which were performed. Following is a general summary of the major findings of the study.

As predicted, students in small schools, with few students per behavior setting, in comparison with students in the large school, with relatively more persons

per setting:

- (1) reported more attraction (own forces), e.g., "I like basketball," "I've always liked plays," "I wanted to learn something new," and
- (2) reported more pressures (foreign forces), e.g., "I was asked to go," "Pep club members were required to go," "They didn't have enough boys without me";
- (3) not only reported more pressures, but pressures made up a larger proportion of their total report, and
- (4) ranked pressures high in importance more often;
- (5) expected more often to participate in a setting which had not yet occurred;
- (6) spoke more often in terms of responsibility to settings and to persons who occupy setting; (This greater responsibility took the form of greater frequencies of (a) felt obligations, e.g., "Band members are expected to go," (b) loyalty to a setting or group, e.g., "The least we can do is support the class," (c) maintenance of the stability of a setting or group, e.g., "It would bring the class closer together," and (d) actual jobs or positions in settings, e.g., "I was responsible for it.")
- (7) not only reported more such responsibility, but responsibility responses made up a larger proportion of their total reported experience.

Predictions of differences between regular and marginal students received only scattered support. The results were as follows: when responding to the open-ended questions, regular students reported greater total numbers of forces toward participation than did marginal students. Within this overall difference, regular students reported more own forces ( $p < .05$ ) and more foreign forces ( $p < .15$ ) than did marginal students. Regular students did not differ from marginal students in the frequency with which they expected to attend a setting which had not occurred, or in the frequencies of responses which indicated responsibility.

It would appear that the greater differences between the school groups than between the student groups (see Table 8.3) was due, in part to the fact that school groups differed greatly in numbers of both own and foreign forces while the student groups differed with respect to own forces and only slightly with respect to foreign forces. In any case, because of the strong differences between the school groups, and the smaller but statistically significant differences

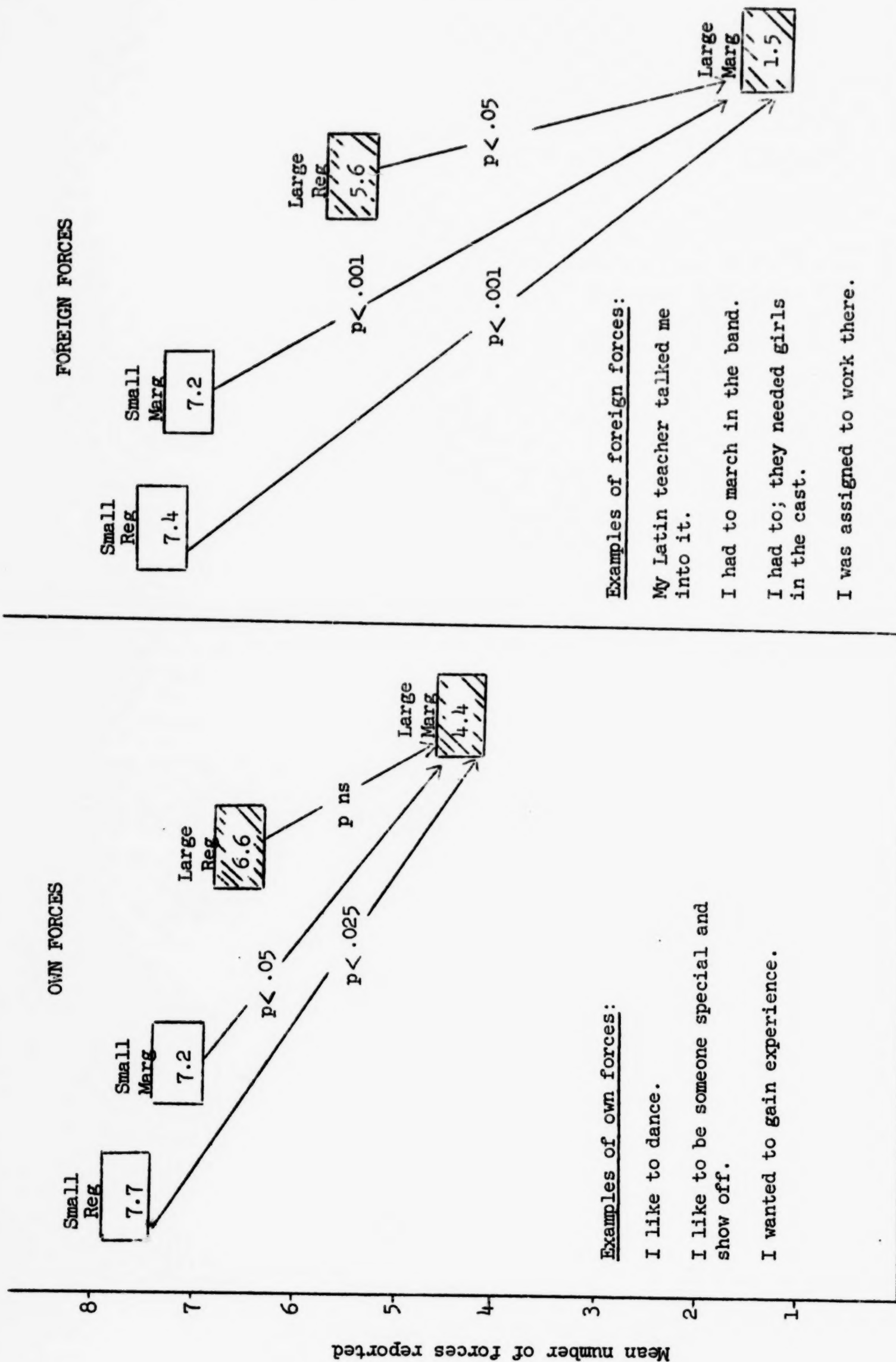


Figure 8.1 Graphical representation of the numbers of own and foreign forces reported by regular and marginal students in the small and large schools (open-ended data)



between student groups, the order of the groups with respect to total forces reported was: small-regular, small-marginal, large-regular, and large-marginal. The marginal students in the small schools did not report the paucity of forces toward participation in behavior settings that their counterparts in the large school reported.

An important discovery in this investigation is that differences in school size P/D ratio contributed more to the variance in both attractions (own forces) and pressures (foreign forces) than did differences in kind of students. This is especially important since own forces are often conceived of as purely a function of "personality" attributes of persons. Chapter 7 provides evidence regarding the specific loci of the school's influences.

#### Detailed Results

Results relevant to each hypothesis will be reported in the order in which the predictions are outlined in the section, Research Hypotheses.

##### School Variable: Small vs. Large

Table 8.4 contains results relevant to the predictions of effects of school size.

Prediction 1.1, Own Forces: Small > Large. The prediction was supported by all data except open-ended data for settings entered.

Prediction 1.2, Foreign Forces: Small > Large. The prediction was supported by all available data.

Prediction 1.3, Responsibility: Small > Large. As indicated in Table 8.4, not only did small school students, in comparison with large school students report greater numbers of responses reflecting responsibility, but such responses made up greater proportions of their total reported experience.

Prediction 1.4, Expectation to Enter Hypothetical Setting: Small > Large. The prediction was supported by the relevant data.

Prediction 2.1, Proportion of Foreign Forces to Total: Small > Large. As predicted, foreign forces made up greater proportions of the reported experiences of small school students than of large school students. In the case of the most meaningful setting the number of own forces was maximized, thus diminishing the proportion of foreign forces.

Table 8.4 Results of statistical tests of relations between school size and numbers of reported forces, responsibility, and expectation to enter a hypothetical setting (S = Small, L = Large)<sup>a</sup>

| Classes of Data                          | Types of Behavior Settings |                  |              |                 |
|------------------------------------------|----------------------------|------------------|--------------|-----------------|
|                                          | Five Actual                | Settings Entered | Hypothetical | Most Meaningful |
| Own forces                               |                            |                  |              |                 |
| Card-sort                                | S > L*                     | S > L            | S > L*       | S > L*          |
| Open-ended                               | S > L                      | ns               | —            | —               |
| Foreign forces                           |                            |                  |              |                 |
| Card-sort                                | S > L*                     | S > L*           | S > L*       | S > L           |
| Open-ended                               | S > L*                     | S > L*           | —            | —               |
| Responsibility                           |                            |                  |              |                 |
| Open-ended                               |                            |                  |              |                 |
| No. of responses                         | S > L*                     | —                | —            | —               |
| Proportion of total                      | S > L*                     | —                | —            | —               |
| Expected entry into hypothetical setting |                            |                  |              |                 |
| Open-ended                               | —                          | —                | S > L*       | —               |
| Proportion of foreign to total           |                            |                  |              |                 |
| Card-sort                                | S > L*                     | S > L*           | S > L*       | ns              |
| Open-ended                               | S > L                      | S > L*           | —            | —               |
| Importance of foreign                    |                            |                  |              |                 |
| Card-sort                                | S > L*                     | —                | ns           | ns              |

<sup>a</sup>All indicated results were significant at the .05 level or less; an asterisk indicates the .01 level or less. A "ns" denotes nonsignificance. A dash indicates that no analysis was available.

Prediction 2.2, Importance of Foreign Forces: Small > Large.<sup>3</sup> As predicted, a greater proportion of small school students than of large school students placed foreign forces in the upper ranks of importance with reference to the five actual settings. Thus, not only (a) did the students from the small schools report more foreign forces, and (b) did foreign forces make up a greater proportion of their total reported experiences, but (c) foreign forces were more important for them in influencing participation. In the case of the most meaningful setting, the importance of own forces was maximized, thus diminishing the importance of foreign forces. With the hypothetical setting, the relative importance of foreign forces was not known to the subjects, thus minimizing school differences.

<sup>3</sup>In the pilot research the ranking operation was found not to be reliable. Although the results are reported, and fall in the predicted direction, they should be seen as suggestive.

From this review of the association between school size and forces toward entry it may be concluded that with the exception of one set of data, i.e., own forces toward entry with the settings actually entered, all the data yielded predicted results. Several results which did not yield significant differences are readily explainable, i.e., proportion of foreign to total for the most meaningful setting and importance of foreign forces for the hypothetical and most meaningful settings.

#### Regular vs. Marginal Students

Results relevant to the prediction concerning kinds of students are found in Table 8.5.

Table 8.5 Results of statistical tests of relations between regular and marginal students and number of reported forces, responsibility, and expectation to enter a hypothetical setting (R = Reg, M = Marg)<sup>a</sup>

| Classes of Data                          | Types of Behavior Settings |                  |              |                 |
|------------------------------------------|----------------------------|------------------|--------------|-----------------|
|                                          | Five Actual                | Settings Entered | Hypothetical | Most Meaningful |
| Own forces                               |                            |                  |              |                 |
| Card-sort                                | ns                         | ns               | ns           | ns              |
| Open-ended                               | R > M                      | ns               | —            | —               |
| Foreign forces                           |                            |                  |              |                 |
| Card-sort                                | ns                         | ns               | ns           | ns              |
| Open-ended                               | ns                         | ns               | —            | —               |
| Responsibility                           |                            |                  |              |                 |
| Open-ended                               |                            |                  |              |                 |
| No. of responses                         | ns                         | —                | —            | —               |
| Proportion of total                      | ns                         | —                | —            | —               |
| Expected entry into hypothetical setting |                            |                  |              |                 |
| Open-ended                               | —                          | —                | ns           | —               |

<sup>a</sup>All indicated results were significant at the .05 level or less. A "ns" denotes nonsignificance. A dash indicates that no analysis was available.

Prediction 3.1, Own Forces: Reg > Marg. This prediction received only meager support in the data; open-ended data from the five actual settings yielded predicted results. In the most meaningful setting, the maximized importance of own forces minimized the differences among students.

Prediction 3.2; Foreign Forces: Reg = Marg. Results on these forces, as summarized in Table 8.5 agree with the prediction of no significant difference between regular and marginal students.

Regular students did not differ from marginal students in (a) the frequency of a clear "yes" on expected entry into the hypothetical setting if it were to occur, (b) the number of responsibility responses, and (c) the proportion of responsibility responses to total reported experience.

From this review of the association between regular and marginal students and forces toward entry, it may be concluded that where differences were predicted, only the open-ended data for the five actual settings yielded predicted results. Where differences were not predicted, the statistics did not reach significance.

#### Combined Effect of School Size and Students

Prediction 4.0 dealt with the overall order of cells in the research design, based on total numbers of forces reported by students: Small-Reg > Small-Marg > Large-Reg > Large-Marg. The statistical test used was the Jonckheere test of ordered alternatives (1954), which allows one to test the null hypothesis of no difference among conditions and accept the alternative hypothesis of a predicted order. Table 8.6 summarizes the relevant statistical results. The data support the prediction.

Table 8.6 Summary of statistical findings on the order of cells, based on total reported forces

| Classes of Data      | Z    | p        | Direction                                          |
|----------------------|------|----------|----------------------------------------------------|
| Five actual settings |      |          |                                                    |
| Card-sort            | 3.80 | < .00007 | Small-Reg > Small-Marg > Large-Reg<br>< Large-Marg |
| Open-ended           | 3.67 | < .00016 | Small-Reg > Small-Marg > Large-Reg<br>> Large-Marg |

#### Order of Cells

|      |       |       |
|------|-------|-------|
|      | Small | Large |
| Reg  | 1     | 3     |
| Marg | 2     | 4     |



Relation between Forces and Behavior

Table 8.7 contains correlation coefficients between reported forces and behavior.

Table 8.7 Correlations between the number of settings participated in and numbers of forces toward entry into the five actual settings

| Behavior Setting Data                                  | Open-Ended Data |         |       | Card-Sort Data |         |       |
|--------------------------------------------------------|-----------------|---------|-------|----------------|---------|-------|
|                                                        | Own             | Foreign | Total | Own            | Foreign | Total |
| No. of settings entered among the five actual settings | .61             | .85     | .87   | .48            | .58     | .54   |
| Participation data, Chapter 6                          |                 |         |       |                |         |       |
| Entries only                                           | .49             | .38     |       | .12            | .05     |       |
| Performances only                                      | .30             | .69     |       | .48            | .60     |       |
| Entries plus performances                              |                 |         |       |                |         |       |
| Total participation                                    | .53             | .66     | .67   | .35            | .38     | .39   |

NOTE: In the table Spearman rho's, corrected for ties, were computed for the first row; Pearson r's were computed for the other rows. Behavioral data for rows two, three, and four were obtained from Chapter 6 for the subjects of this study; scores were totals for the varieties of settings from which the five settings of this study were selected.

The correlations suggest the following conclusions: (a) As a validity check, row one of the table indicates a relationship far above chance between reported forces and actual behavior. (b) The open-ended data tended to relate more strongly to actual behavior than the card-sort data. (c) Foreign forces tended to be more highly related to participation than own forces, especially to performances. The strong relationship between foreign forces and participation indicates that the studies reviewed earlier (Chapter 3) disregarded that variable associated with size which was found here to be most highly related to behavior in the form of participation and responsible involvement in behavior settings.

### Partial Replication

In the study reported above, the large school was 20 times as large as the small schools. Data were subsequently gathered in a new set of schools in which the larger school (Haven) had 229 students and a P/D ratio 2.29 while the small schools (Dorset and Hearn) each had 53 students and an average P/D ratio of 1.00. Thus, the predictions were tested in schools which fell at different points on the size continuum than the schools of the main study.

All subjects in this replication were Juniors. The 15 Juniors in the combined Dorset-Hearn group and the 39 Juniors in Haven were classified by sex and IQ quartile, to assure similar distributions of students. As it turned out, only Juniors in the upper quartiles were used, since the small schools contained no Juniors in the lower quartile.

The method for eliciting the selected subjects' experiences of forces toward participation in five behavior settings was a modified version of the card-sort technique used in the main study. Data were gathered from groups rather than in individual interviews. The original card-sort items (see Appendix 8.3) were printed on questionnaire sheets.

Five such sheets, one per behavior setting, were given to each subject. Subjects filled out the questionnaire sheets under the direction of a research worker. After background remarks, subjects wrote the name of a setting at the top of the first page, and circled "yes" if they had attended this setting at least once, and were then instructed, "Read each item in the list carefully, and if it was for you a real reason for, or pull toward, attending (setting), write in a 'yes' in the blank after it. If it wasn't, write in a 'no.' Even if you didn't attend this activity, there may have been some pulls toward going, so work through the list, putting either a 'yes' or a 'no' in each blank." The same procedure was repeated for another setting until all subjects finished all five settings.

The technique employed yielded data on the number of forces toward entry into each setting (the responses marked "yes"). These were summed across the five settings, yielding, as in the main study, individual scores of the number of own forces and foreign forces. A ratio of foreign forces to total was then computed for each subject.

Since the distributions of scores for total, own, and foreign forces met the assumption of homogeneity of variance, analysis of variance procedures were used on them. The distribution of ratio scores was dichotomized at the overall median, and chi square was used for the analysis. Pearson product moment correlations were then calculated between the total number of forces and the number of participations in the varieties of settings from which the five settings were selected. Such correlations were calculated separately for the small and larger schools, and then for the combined sample.

Table 8.8 summarizes the results of analyses relating numbers of forces to school size.

Table 8.8 Summary of statistical tests of relations between school size and forces toward participation in five behavior settings (S = Small, L = Larger)

| Classes of data                | Mean               |        | Statistic       | p      | Direction |
|--------------------------------|--------------------|--------|-----------------|--------|-----------|
|                                | Small <sup>a</sup> | Larger |                 |        |           |
| Own forces                     | 18.31              | 15.67  | F = 3.90        | ns     | none      |
| Foreign forces                 | 32.30              | 22.23  | F = 12.93       | < .01  | S > L     |
| Proportion of foreign to total |                    |        | $\chi^2 = 3.97$ | < .025 | S > L     |

<sup>a</sup>Hearn and Dorset are combined into a "small" category.

As predicted, Juniors from the small schools reported greater numbers of foreign forces toward participation in the five settings. Not only did they report greater numbers of foreign forces, but foreign forces made up greater proportions of their total reported experience. The students from the small schools tended to respond with more own forces, but the differences did not reach statistical significance.

Results of correlations between numbers of forces and numbers of participations were as follows: (a) for the overall (combined sample,  $r = .24$  (ns);

(b) for the small school group alone,  $r = .30$  (ns); (c) for the larger school group alone,  $r = .33$  ( $p < .05$ ).

In this extension of the study, school populations differed by a factor of 4 to 1, and P/D ratios by a factor of 2 to 1, rather than by 20 to 1 and 4 to 1, respectively, as in the main study. Results from these studies indicate that the theory predicts differences in experienced forces which are sensitive to both wide and narrow differences in school size and P/D ratio. In both the earlier study and in this extension foreign forces varied significantly with size. In the earlier study, own forces (attractions) tended not to vary as widely with size as did foreign forces, and in this extension own forces did not differ significantly.

One purpose for using the modified technique was to test the possibility of using group sessions rather than individual interviews to gather data on forces toward participation. The correlations between forces and participation suggest that the modified technique yielded data which were less valid than the data obtained by the earlier methods, especially the technique yielding open-ended data. The correlations for the whole group of subjects in this extension of the study did not reach significance. Methodologically, these findings suggest that the three basic techniques used thus far fall in the following descending order of validity of the data they yield: (a) unaided recall of forces, i.e., open-ended data,  $r = .67$  ( $p < .01$ ); (b) stimulated but forced choice recall with sorting of choice items, i.e., card-sort data,  $r = .39$  ( $p < .05$ ); and (c) stimulated but forced choice recall with simple yes-no marking of responses, i.e., questionnaire data,  $r = .24$  (ns). The three correlations reported here are based on numbers of forces for the five settings and total frequency of participation in the varieties of settings from which the five were selected.



### Discussion

Results from this study and a partial replication yielded general support for the theory of behavior setting size, or P/D ratio, indicating that the theory is a powerful predictor from ecology to the experience and behavior of persons.

From this study and the others in this volume, it seems clear that school size is an extremely important variable in the ongoing lives of students. Students in small schools report more forces toward participation in behavior settings than do students in large schools. These differences appear in attractions as well as pressures. Perhaps more importantly, the small school does not produce the extreme differences in reported forces that the large school produces. The small school contains fewer "outsiders" than the large school; in fact, both the regular and marginal students in the small schools report more forces than the regular students in the large school.

Another important finding of this study is that the responses of small school students reflect more involvement and felt responsibility. The implications of this finding are clear if one assumes that "the best way to learn responsibility is to have it." The small school students simply live under greater day-by-day attraction, felt obligations, and external pressures to take active part in the various functioning parts of their schools.

Foreign forces vary more with size than do own forces, and foreign forces appear to be more highly related to actual participation and involvement than do own forces. These findings suggest that foreign forces are more crucial than own forces in effecting those relationships between size and participation reported in other chapters of this volume.

## CHAPTER 9

### Some Effects of High School Consolidation upon Student Experiences

W. J. Campbell

Consolidation is variously defined, but, as used in this study, it signifies the transportation of high school students from their local communities to a school in a neighboring community. The essential elements are: (a) commuting, and (b) attendance at a school which is larger than that which had previously existed, or could exist, in the local community.

Consolidation of high schools, like most educational issues, has given rise to considerable controversy. On the one hand, its supporters claim that: (1) students benefit through better and more varied curriculums, better classifications, better facilities, especially in such subjects as science and music, contact with better teachers, opportunities to participate in better and more varied extracurricular activities, wider social opportunities and experiences, more regular attendance as a result of being, in some cases, transported from door to school; (2) parents benefit through reduced expenditure on education; (3) the community benefits through the creation of closer ties with neighboring communities.

On the other hand, the opponents of consolidation claim that: (1) students lose through increased breaks in their education, loss of contact with local teachers who know the community and the families well; spending time on commuting which might be spent with greater profit on other activities, fewer opportunities to participate in extracurricular activities; (2) parents lose through being denied opportunities to participate in the control of their school; (3) the community loses through being denied the facilities of an active school which could serve as a cultural and educational center, the breakdown of community cohesion and participation, especially in youth activities.

These and other similar arguments have customarily been advanced by those who enter the controversy on consolidation. However, few systematic attempts have been made to examine the assertions empirically. Apart from studies on school size (and those are reviewed in Chapter 3), almost all of the literature on consolidation deals with alleged economies, and administrative procedures. The few reports involving student reactions which we found dealt with changes in intelligence quotients and the like. These are important reports, but our interest lies rather in the experiences and processes which underlie changes such as these, and the published work has been of little direct benefit to us.

#### Scope

Our investigations were focussed upon the out-of-class experiences of the students and can be divided into four categories: (a) nature of the forces which led to participation in extracurricular behavior settings; (b) the extent and level of participation in these settings; (c) the satisfactions gained from these participations; and (d) a daily round-of-life survey. We sought answers to questions such as the following. In comparison with students attending local schools:

Are students in consolidated schools under more or less pressure to participate in school activities?

Does the nature of the pressures differ?

Do students in consolidated schools participate to a greater or lesser extent in school activities?

Do they miss out or gain in particular kinds of activity?

Do students in consolidated schools report more or less satisfaction with school activities?

How does consolidation affect the daily rounds of life of the students involved?

Does consolidation affect community participations by students?

The state of Kansas at the present time provides an excellent field laboratory for the study of questions such as these. In many districts consolidation at the high school level has already taken place, and schools which were formerly used for secondary students are now being used for grade students or are standing idle. On the other hand there is no dearth of small local high schools that are still functioning actively.

For purposes of the study we selected three groups of students:

Group 1, Small Local. Students in attendance at small rural high schools within the boundaries of their own communities. There were two schools involved here and each had a student population of 53. Each, too, was situated within a small town of about 200 persons.

Group 2, Consolidated. Students who came from communities which were similar in size to those of Group 1, but who were transported daily by bus to a county high school, with an enrollment of 370 students, within a larger district. These students, like the previous ones, came from two different communities, each of which contributed 41 students.

Group 3, Larger Local. Students in attendance at the larger county high school referred to above, but who came from the community within which the school was situated. There were 84 students in this group, and the total population of the community was 551 persons.<sup>1</sup>

We began by drawing up a combined list of the 82 consolidated students, and then attempted to match each student on the list with one from each of the small local and larger local groups, yielding a matched three. This matching was undertaken on the basis of sex, class in school, and percentile rank on the Differential Aptitude Test (D.A.T.). By maintaining fairly rigorous standards in the percentile rank matching, it was possible to form 61 matched threes, who were distributed as shown in Table 9.1.

The study was designed to isolate the effects of the two variables listed earlier, namely, commuting and size of school, but it was impossible to avoid

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<sup>1</sup>In terms of the schools referred to in Chapters 4 and 8, small local = Dorset and Hearn; consolidated = Lang and Media residents attending Eakins; larger local = Eakins residents attending Eakins High School.



Table 9.1 Distribution of matched groups of small local, consolidated, and larger local students<sup>a</sup>

| Percentile ranks: D.A.T.    | Freshmen | Sophomores | Juniors | Seniors | Total |
|-----------------------------|----------|------------|---------|---------|-------|
| Upper quartile (Q1): Girls  | 2        | 3          | 3       | 2       | 10    |
| Boys                        | 2        | 4          | 1       | 2       | 9     |
| Second quartile (Q2): Girls | 4        | 2          | 2       | 2       | 10    |
| Boys                        | 3        | 4          | 2       | 3       | 12    |
| Third quartile (Q3): Girls  | 4        | 0          | 0       | 0       | 4     |
| Boys                        | 2        | 2          | 3       | 0       | 7     |
| Lower quartile (Q4): Girls  | 2        | 2          | 1       | 1       | 6     |
| Boys                        | 2        | 1          | 0       | 0       | 3     |
| Totals                      | 21       | 18         | 12      | 10      | 61    |

<sup>a</sup>A number in the table denotes that frequency of matched threes.

the inclusion of a third variable—size of community. Thus the small local students came from small communities and attended small local schools; the consolidated students came from small communities and attended what was for them a larger consolidated school; and the larger local students came from a medium-sized community and attended what was for them a larger local school.

It seems likely that the three variables, and perhaps others, interact in a complex manner, so that to treat them as distinguishable causal elements is to do less than justice to the complexity of relationships. Nevertheless, as a first step, it seems reasonable to assume that:

1. No differences between any two of the groups would suggest that the effects of consolidation in the areas studied are negligible.

2. A difference between small local students, on the one hand, and consolidated and larger local ones, on the other, would suggest the influence of some school factor.

3. A difference between consolidated students, on the one hand, and small local and larger local ones, on the other, would suggest the influence of commuting.

4. A difference between larger local students, on the one hand, and small local and consolidated ones, on the other, would suggest the influence of community size.

As suggested above, these are merely reasonable assumptions to guide the analyses and interpretations.

#### Forces to Enter School Behavior Settings

Data on forces were obtained from the questionnaire described in Chapter 8 pages 137-138 and Appendix 8.3. In this, students are presented with a number of school behavior settings and are asked to indicate for each what were for them real forces or "pulls" toward participation. The settings used in this study were: Home Basketball Game, Homecoming Dance, Christmas Music Program, Magazine Sale, and Pep Rally. These were chosen because of their occurrence in each of the schools during the current school year.

In the analysis of the data, no attempt has been made to retain the identity of each setting; rather responses have been summed across the five settings in order to find the frequency with which each student has reported the existence of each force.

Students in all three groups reported the existence of a considerable number of forces associated with entry into the settings: a mean of 10.48 per setting for small local students, 9.60 for consolidated students, and 9.67 for larger local ones. Overall differences here were not significant. The three groups did not differ either with respect to the relative potency of the forces, #6—"I like to be active and do things," #15—"I knew this activity needed people," and #7—"I like this activity" were consistently at the top of the lists, while #5—"It gave me a chance to be someone special," #12—"I saw that everyone else was going, and it's not fun to be left out," and #14—"This

activity is required for students like me" were invariably given few affirmative markings.

In the previous work the forces were classified according to own (i.e., arising from within the personality of the respondent for example, "I thought I might learn something") and foreign (i.e., originating from without the respondent, for example, "I was expected to go"). As a first step, we have made a similar breakdown here, and the data are presented in Table 9.2.

Table 9.2 Breakdown of forces into own and foreign

| Subgroups  | Study Groups    |         |                  |         |                  |         |
|------------|-----------------|---------|------------------|---------|------------------|---------|
|            | Small Local (1) |         | Consolidated (2) |         | Larger Local (3) |         |
|            | Own             | Foreign | Own              | Foreign | Own              | Foreign |
| Freshmen   | 434             | 713     | 474              | 563     | 483              | 539     |
| Sophomores | 340             | 516     | 392              | 489     | 348              | 434     |
| Juniors    | 271             | 439     | 238              | 340     | 271              | 383     |
| Seniors    | 210             | 274     | 183              | 255     | 209              | 283     |
| Totals     | 1255            | 1942    | 1287             | 1647    | 1311             | 1639    |

This analysis revealed no overall or subgroup differences in the number of own forces, but small local students reported more foreign forces than did those from the other two groups.<sup>2</sup>

F values were: Groups 1 and 2—8.894 ( $<.01$ ); Groups 1 and 3—11.293 ( $<.01$ ); Groups 2 and 3—ns.

In an attempt to examine the broad difference in greater detail further subdivisions into the following clusters of behavior setting claims were made:

1. Items suggesting intellectual attraction. #1 "I thought I might learn something there " and #2 "It was a chance for me to do or see something new and different."

2. Items suggesting external pressures. #9 "Others wanted me to go," #10 "I was expected to go," #13 "I was told or urged to go," and #14 "This activity is required for students like me."

<sup>2</sup>Unless otherwise stated, an F value based on the formula for the matched-pair design has been used to assess significance levels.

3. Items suggesting anticipated enjoyment. #17<sup>3</sup> "I thought it would be lots of fun," #7 "I like this activity," #6 "I like to be active and do things," #7 "In general I like this activity; by going I could help to see to it that it would be there for me to enjoy again," and #8 "In general I like this activity; by doing something there I could see to it that it would be there for me to enjoy again."

4. Items suggesting social attractions. #11 "Everybody else was going, so I wanted to go, too," #3 "It gave me a chance to be with the other kids," and #12 "I saw that everyone else was going, and it's not fun to be left out."

5. Items suggesting personal responsibility. #18<sup>3</sup> "I had a responsibility with the activity," #15 "I knew this activity needed people," and #16 "I knew this activity needed to have certain things done."

6. Items suggesting opportunity to acquire primary status. #5 "It gave me a chance to be someone special."

Cluster totals for each of the three study groups are shown in Table 9.3.

Table 9.3 Comparison of groups according to claim clusters

| Clusters                   | Small<br>Local (1) | Consoli-<br>dated (2) | Larger<br>Local (3) | Significance                  |
|----------------------------|--------------------|-----------------------|---------------------|-------------------------------|
| 1. Intellectual            | 250                | 303                   | 313                 | ns                            |
| 2. External pressure       | 669                | 533                   | 560                 | Gps. 1:2 < .01; Gps. 1:3 < .0 |
| 3. Anticipated enjoyment   | 1096               | 1061                  | 1059                | ns                            |
| 4. Social                  | 508                | 501                   | 489                 | ns                            |
| 5. Personal responsibility | 619                | 483                   | 473                 | Gps. 1:2 < .01; Gps. 1:3 < .0 |
| 6. Primary status          | 55                 | 53                    | 56                  | ns                            |

As Table 9.3 shows, significant intergroup differences were found with respect only to external pressures and personal responsibilities.

From this examination of entry forces we can draw two conclusions: (1) Students attending small local schools are more aware than others of claims associated with wishes, expectations, demands and requirements of other persons, and they also mention more frequently claims associated with personal responsibilities which they

<sup>3</sup>This item was added to the list shown in Appendix 8.3.



hold or perceive themselves as holding. (2) The differences noted clearly appear to be associated with school size.

#### Participation in Extracurricular Behavior Settings of the School

To assess the extent and level of student participation in the extracurricular behavior settings of the schools, a careful survey of all settings which had occurred from September 1961 to March 1962 was made, and then students were asked to complete a questionnaire of the kind described in Chapter 6 and Appendixes 6.1 and 7.1 in which they indicated: (a) whether or not they attended the settings at least once during the period under review, and (b) exactly what they did in those settings which they attended. The statements given in the second part of this questionnaire were then used to determine levels of penetration. Thus:

Level 1: "watched," "listened," "danced," "ate"

Level 2: "practiced football," "practiced my part in the play "

Level 3: "sold popcorn at the match," "worked with the other Juniors on the stall," "was a prompter at the play"

Level 4: "played on the team," "sang a solo," "had a part in the play," "kept minutes of the meeting "

In general terms, these levels range from just being present at the setting, through more active participation, to taking a responsible part in the proceedings. A score corresponding to the level penetrated was awarded each response.

As a first step in the analysis of the data, we considered each student's grand total score of participation, i.e., number of behavior settings in which participation occurred on any level. This revealed the following means:

Small local 33.43; Consolidated 36.79; Larger local 39.31

F values were: Groups 1 and 2—6.011 ( $< .05$ ); Groups 1 and 3—14.606 ( $< .01$ ); Groups 2 and 3—ns.

Thus, on first glance, students attending the larger school appear to record greater participation than do those from the smaller ones. However, a breakdown

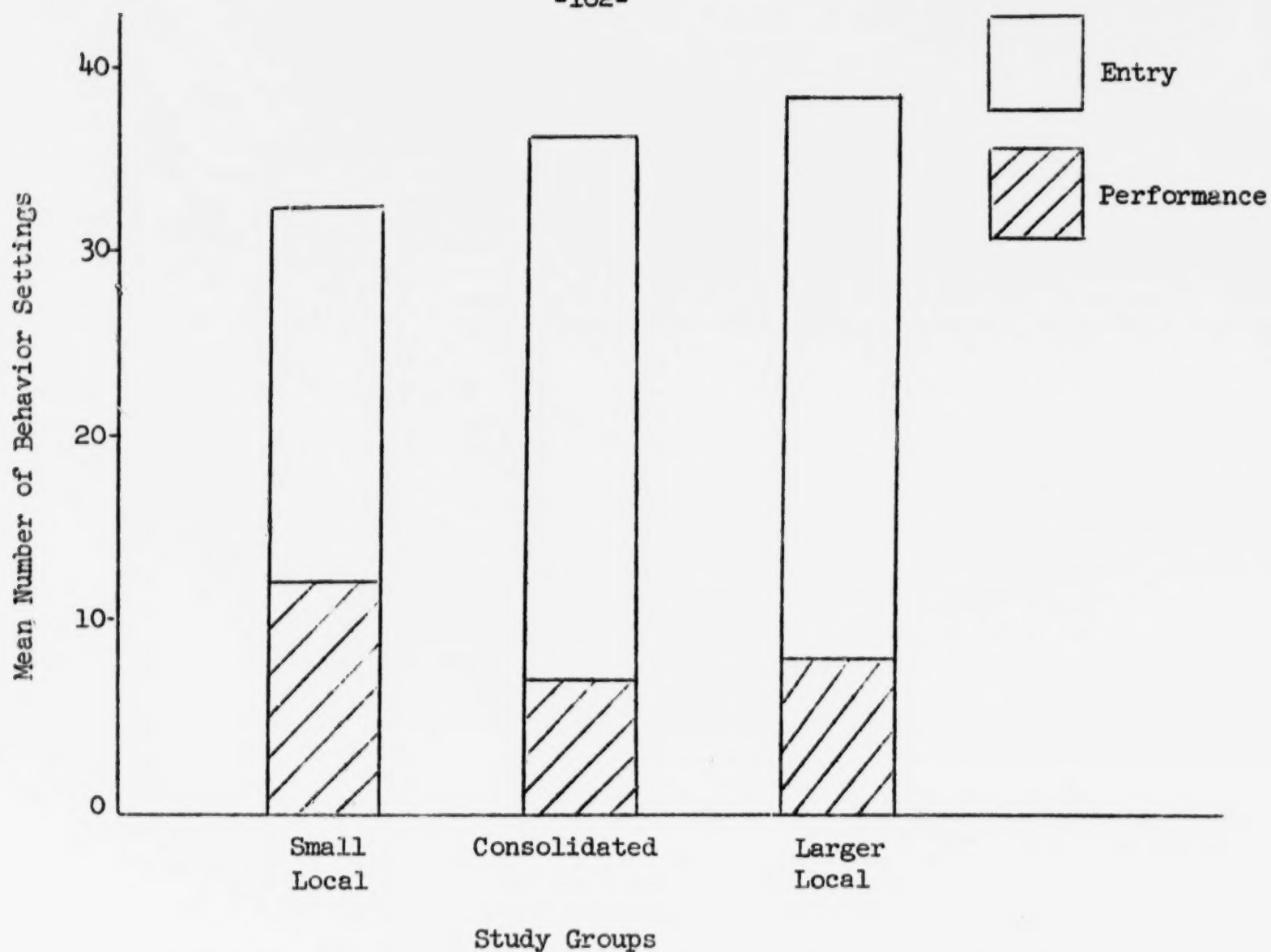


Figure 9.1 Participation in behavior settings at two levels

of the grand total score into entries (levels 1 and 2) and performances (levels 3 and 4) shows that the apparent superiority of the larger school arises from the many more entry participations which its students experience. Group means for this category were:

Small local 21.29; Consolidated 29.41, Larger local 30.75

F values: Groups 1 and 2—53.746 ( $< .01$ ); Groups 1 and 3—66.653 ( $< .01$ ); Groups 2 and 3—ns.

Performance scores, on the other hand, suggested the superiority of the small schools, for group means were:

Small local 12.14; Consolidated 7.38; Larger local 8.56

F values: Groups 1 and 2—5.085 ( $< .05$ ); Groups 1 and 3—7.862 ( $< .01$ ); Groups 2 and 3—ns.

These differences among the three groups of students are shown in Figure 9.1.

To determine whether these findings were consistent within the different types of setting, we have made further analyses among 10 super-varieties: Athletics, Operational Settings, Parties and Dances, Student Government Settings, Voluntary Work Settings, Journalism Settings, Outings, Club Meetings, Required Assemblies, and Voluntary Programs (see Chapter 6). The findings can be summarized here as follows:

(a) Settings concerned with Student Government and Journalism did not feature prominently among extracurricular activities, and differences from one study group to another were negligible throughout.

(b) Operational settings almost invariably demanded entry levels only, and most students participated in these to that extent; no differences were found among the groups.

(c) Athletic and Party settings were entered by most students, and it was in these two super-varieties that the overall trends were shown most clearly, i.e., students from the larger school recorded many more entries, but students from the smaller schools recorded many more performances.

(d) Required Assemblies were more prominent in the larger school, and this applies to both entries and performances, but Voluntary Work Settings, again at both levels of penetration, were more prominent in the smaller schools.

(e) Outing entries appeared more frequently on the records of the small local students, and so did Outing performances, but this difference was not statistically significant.

(f) Students from the larger school reported more Club Meeting entries, but differences on performances were not significant.

(g) No significant differences were found for entry into Voluntary Programs, but students from the small local group scored higher on performances.

In general the super-variety analysis is found to support the two main trends: more entries by consolidated and larger local students; more performances by small local students.

Finally, although, as we have seen students from the larger school had a higher grand total score than did those from the smaller schools, the reverse was true for scope score. Students from the smaller schools participated in a greater number of behavior setting super-varieties. The mean numbers of super-varieties were: Small local 7.00; Consolidated 6.49; and Larger local 6.39.

F values: Groups 1 and 2—5.085 ( $< .05$ ); Groups 1 and 3—7.862 ( $< .01$ ); Groups 2 and 3—ns.

If only those super-varieties in which performances were recorded are taken into consideration, the small local students are found to widen the distance between themselves and the others. Thus, from a total of 10 super-varieties, the mean number of super-varieties in which performances occurred were:

Small local 4.49; Consolidated 3.06; Larger local 3.18;

F values were: Groups 1 and 2—26.762 ( $< .01$ ); Groups 1 and 3—27.978 ( $< .01$ ); Groups 2 and 3—ns.

These findings on extracurricular behavior suggest that:

(a) students in attendance at larger schools are likely to report more entry participations;

(b) students in attendance at small schools are likely to report more performance participations;

(c) students in attendance at small schools are likely to report participation in a broader range of super-variety settings.

#### Satisfactions Derived from the Most Valued Settings

After reporting participations in extracurricular settings, the students were asked: (a) to record those settings that were for them especially good, satisfying and worthwhile and (b) to indicate alongside each selected setting precisely what made it especially good, satisfying and worthwhile.

The first finding is that the small local students were inclined to list more settings as especially worthwhile than were students from either of the other two groups. Mean numbers were:

Small local 3.86; Consolidated 2.67; Larger local 2.92.

F values were: Gps. 1 and 2—21.161 ( $< .01$ ); Gps. 1 and 3—13.560 ( $< .01$ ); Gps. 2 and 3—ns.

A closer examination showed that this difference in favor of small local students arose mainly from the larger number of performance settings which they listed.



F values on entry settings were not significant, but those for performance were: Gps. 1 and 2—27.535 ( $<.01$ ); Gps. 1 and 3—9.581 ( $<.01$ ); Gps. 2 and 3—ns.

In addition to these differences in total number of settings mentioned as satisfying there were others concerned with super-varieties. Athletic settings headed each list, Parties and Dances were second in each case, and at the bottom one tended to find the super-varieties of Student Government, Journalism, and Voluntary Work Settings. Within the top and bottom groups some differences were evident, but the main variation occurred within the middle block of super-varieties. Thus Voluntary Programs, Outings, and Operational Settings were mentioned more frequently by the small local students, while Club Meetings and Required Assemblies were mentioned very much less frequently by this group.

In the first-level analysis of the values data, use was made of the code discussed in Chapter 7. The use of this code requires, firstly, that the responses be broken up into single value units, and, secondly, that the units be assigned to appropriate categories. It was not anticipated that many of the 40 categories would yield significant intergroup differences, but, on the basis of both theory and previous research (Chapter 7), differences were predicted within a small number of super-categories. For this reason a special examination was made of Competence, Learn About, Novelty, Large Entity Affiliation, Big Action and Test, and Vicarious Enjoyment. The findings showed that the study groups did not differ significantly with respect to the first four of these, but that the small local students were more inclined to mention values denoting Big Action and Test and Vicarious Enjoyment (both at the .05 level) than were the other two groups.

Emphasis placed upon Big Action and Test by the small local students confirms one of the findings in Chapter 7 regarding satisfactions of small school Juniors. However, the more frequent mention of Vicarious Enjoyment is not in line with results from the previous study; in that investigation, Vicarious Enjoyment was more typical of large school Juniors.

The analysis by super-categories tends to be mainly descriptive in nature and tells little about the dynamics of behavior. For this reason it was decided in this consolidation study to proceed to a second-level analysis in which use was made of the developmental-task concept. It was assumed that: (a) in the process of growing up, adolescents (as well as children and adults) are faced with a series of developmental tasks, and (b) they will tend to seek out and report as most worthwhile those settings which contribute to the achievement of these developmental tasks. Accordingly, the value categories were further grouped into 10 clusters on the basis of inferences made about the nature of the developmental tasks being satisfied. These clusters and the categories which they encompass are given below. For the description of the categories and sample responses see pages 107-112.

Physical

Participating in activities which improve physical health, increase fitness and physical skill

Categories: 1 Physical Competence,  
6 Learn About-Skill

Social

Getting along with others

Categories: 3 Social Competence, 5 Learn  
About-Social, 28 Informal Affiliation,  
16 New People

Knowledge

Acquiring knowledge concerning future educational and vocational choices, developing intellectual interests, experiencing novel events, new and interesting situations

Categories: 4 Other Competence, 7 Learn  
About-Cognitive Areas, 8 Learn About-  
Vague, 9 Learn About-Future, 15 New  
Experience, 37 Milieu Knowledge

Responsibility

Developing social responsibility and group loyalties, contributing to group success

Categories: 13 Contribution to Others,  
24 Support Indication to Other, 31  
Affiliation-School, 39 Others Get Value

Philosophy

Acquiring a philosophy of life and an ethical code

Category: 35 Uplift

Self-concept

Developing a self-concept

Categories: 10 Challenge, 11 Competition,  
12 Success, 19 Competition-Vicarious

Primary Status

Achieving primary status, enjoying recognition and appreciation

Categories: 27 Be Valued, 14 Big Participation, 32 Little Participation

Derived Status

Achieving derived status, enjoying the feeling of support by others

Categories: 25 Support from School Adults, 26 Support from Others, 29 Affiliation-Group, 30 Affiliation-Crowd

Self-expression

Having the opportunity and ability to express oneself

Categories: 2 Emotional Competence, 38 Psychological Release, 17 Escape, 18 Something to Do, 33 Have-a-Say

Zest for Living

Developing a zest for living, enjoying an activity, having fun

Categories: 20 Excitement, 21 Vicarious Valence, 22 Action Valence, 23 Unspecified Valence

After arranging the value categories into these developmental-task clusters, we have considered: (a) the number of students from each study group who recorded at least one value that has been assigned to a particular cluster; and (b) the number of mentions recorded by these students. The findings are summarized in Table 9.4. (In the case of (a) above, the chi square test has been used to assess significance levels, and in the case of (b), the sign test.)

As the summary in Table 9.4 shows, the groups did not differ with respect to their responses associated with Responsibility, a Philosophy of life, Primary Status, Derived Status, and Self-expression. However: (a) more students from the small local group than from the others mentioned values concerned with Physical well-being and the development of a Self-concept, and the number of times that these were mentioned by small local students was correspondingly higher; (b) while the number of small-local students who mentioned values associated with Knowledge and Zest for Living was not very much higher than the number of students in the other two groups, the former group did tend to mention these values more frequently; and (c) while the number of students mentioning Social values did not differ from one group to another, the small local and consolidated students made use of this cluster more frequently than did those from the larger community.



Table 9.4 Number of subjects in each student group mentioning each developmental task, and number of mentions (Study groups: 1 = small local, 2 = consolidated, 3 = larger local)

| Developmental-Task Cluster  |                 | Study Groups |    |     | Significance                   |
|-----------------------------|-----------------|--------------|----|-----|--------------------------------|
|                             |                 | 1            | 2  | 3   |                                |
| 1. <u>Physical:</u>         | No. of persons  | 13           | 5  | 4   | Gps. 1:3 < .02; Gps. 1:2 < .05 |
|                             | No. of mentions | 17           | 7  | 5   | Gps. 1:2 < .05; Gps. 1:3 < .01 |
| 2. <u>Social:</u>           | No. of persons  | 34           | 32 | 24  | ns                             |
|                             | No. of mentions | 68           | 65 | 38  | Gps. 1:3 < .01; Gps. 2:3 < .01 |
| 3. <u>Knowledge:</u>        | No. of persons  | 25           | 15 | 17  | ns                             |
|                             | No. of mentions | 37           | 19 | 22  | Gps. 1:2 < .05; Gps. 1:3 < .05 |
| 4. <u>Responsibility:</u>   | No. of persons  | 16           | 14 | 13  | ns                             |
|                             | No. of mentions | 21           | 16 | 19  | ns                             |
| 5. <u>Philosophy:</u>       | No. of persons  | 8            | 5  | 9   | ns                             |
|                             | No. of mentions | 13           | 7  | 12  | ns                             |
| 6. <u>Self-concept:</u>     | No. of persons  | 23           | 11 | 11  | Gps. 1:2 < .02; Gps. 1:3 < .02 |
|                             | No. of mentions | 28           | 13 | 19  | Gps. 1:2 < .05; Gps. 1:3 < .05 |
| 7. <u>Primary status:</u>   | No. of persons  | 18           | 13 | 18  | ns                             |
|                             | No. of mentions | 27           | 23 | 27  | ns                             |
| 8. <u>Derived status:</u>   | No. of persons  | 6            | 3  | 3   | ns                             |
|                             | No. of mentions | 9            | 4  | 3   | ns                             |
| 9. <u>Self-expression:</u>  | No. of persons  | 7            | 5  | 4   | ns                             |
|                             | No. of mentions | 9            | 6  | 5   | ns                             |
| 10. <u>Zest for living:</u> | No. of persons  | 51           | 40 | 45  | Gps. 1:2 < .05                 |
|                             | No. of mentions | 159          | 78 | 101 | Gps. 1:2 < .01; Gps. 1:3 < .01 |



What do these findings tell us about the schools, commuting, and communities? Presumably any differences found might point to differences in the significance of the task, differences in the provisions for the satisfaction of these, or a mixture of both. Our study was not designed to unravel these factors, but the community difference associated with Social cluster would appear to reflect either a paucity of social experiences within a small community and hence a greater need to seek out such experiences elsewhere, or a stronger demand from smaller communities for the development of social competence. On the other hand differences in values associated with Physical Well-being, Knowledge, Self-concepts, and Zest for Living appear to be related to the factor of school size. A small school would appear to provide, within its extracurricular settings, more opportunities for the satisfaction of these particular personality needs.

#### Daily Round of Life: A Pilot Study<sup>4</sup>

In order to obtain data on the effects of school consolidation upon the students' daily rounds of life, diary record forms were prepared and given to those students from the matched samples who were at school on the chosen day.<sup>5</sup> These records sought information on: (1) time of getting up in the morning, (2) out-of-class activities engaged in during the day, (3) the places where these activities were undertaken, (4) the persons who were present when the activities were undertaken, (5) the amount of time spent on each activity, and (6) time of going to bed.

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<sup>4</sup>The data of this study refer to a single day in the lives of the students.. Care was taken before hand to choose a "typical" day, but, as often happens, the best laid plans of mice and men went astray. In the first place, the first American orbital flight was launched on that day and was reported extensively on television; the interest was very high. In the second place, snow fell heavily in eastern Kansas on that day. These two important occurrences need to be considered when the data are being examined, but there is no reason to believe that they affected one study group more than another. One event with possible differential effects was a basketball game at Dorset, one of the small schools. These facts point to the need for reports upon a sample of days when it is possible to do a more definitive study. Nevertheless, the evidence provided by a single day reveals the values of this approach, and it indicates trends.

<sup>5</sup>An example of a completed daily record is given in Appendix 9.1.

A total of 165 records were returned by the students on the following day, and none of these was facetious or grossly incomplete. This represented a return of just over 90 per cent (95 per cent from the small local, 90 per cent from the larger local, and 85 per cent from the consolidated) and accounted for more than 95 per cent of those who had been at school on the previous day. Unfortunately, but not unexpectedly, the 18 absentees did not form six groups of matched threes, but rather were scattered differently throughout the lists. Since only complete threes have been used in the subsequent analyses, the total number of records used has dropped to 138—46 matched threes.

The amount of out-of-class time available to the students was found by calculating the total time available between getting up in the morning and going to bed at night, and then subtracting from this time spent in school classes. The findings are shown in Table 9.5.

| Table 9.5 Out-of-class time <sup>a</sup> |                          |                           |                           |
|------------------------------------------|--------------------------|---------------------------|---------------------------|
|                                          | Small local<br>(Group 1) | Consolidated<br>(Group 2) | Larger local<br>(Group 3) |
| Rising: median                           | 7:08 a.m.                | 6:40 a.m.                 | 6:45 a.m.                 |
| mode                                     | 7:00-7:30 a.m.           | 6:30-7:00 a.m.            | 6:30-7:00 a.m.            |
| Retiring: median                         | 10:15 p.m.               | 10:07 p.m.                | 10:03 p.m.                |
| mode                                     | 10:00-10:30 p.m.         | 10:00-10:30 p.m.          | 10:00-10:30 p.m.          |
| Available out-of-class                   |                          |                           |                           |
| time: mean no. of minutes                | 509                      | 527                       | 517                       |

<sup>a</sup>Differences between any two groups were not significant.

The amount of time unaccounted for was very small: 102 of the 138 students accounted for every minute available to them (indeed a small proportion of these over-estimated slightly), and the remaining 36 failed to account for an average of 30 minutes each. This unaccounted-for time was only 1.5 per cent of the

total available time. Since the diaries which could not be used in the analyses because of absences among the threes did not differ from the others in the matter of accounting for time, we can summarize the position by stating that 90 per cent of the students in the samples accounted for 98.5 per cent of their out-of-class time.

How accurate are the data recorded by the students? It is possible that the 1.5 per cent of unaccounted-for time was spent on activities, which the students did not wish to disclose, but a certain proportion of this probably resulted simply from under-estimations. It is possible, too, that some of the students "cooked up" the information given, but checks concerned with meals, personal activities, travel and the like, suggested that the records were completed carefully and accurately. Estimations of time are, of course, subject to personal errors—30 minutes spent "talking with the girl friend" might seem like only 5, whereas the same time spent on "homework" might seem like 90.

In the analysis of the data we began by breaking up the daily stream of life into situations, which are compounds of activities, places, and social groups. Thus "watching television, in the living room, with mother and father" is one situation, and "eating lunch, in the cafeteria, with school friends" is another. Any change in one or more of the components results in a changed situation. Thus "doing homework, in the living room, with mother and father" is a different situation from "watching television" in the same place with the same persons, and "eating lunch, in the local cafe, with school friends" is different from "lunch in the school cafeteria." Finally, "watching television in the living room, with mother and father" is different from engaging in the same activity, in the same place, but with friends instead of parents.

A consideration of the total number of different situations experienced showed that small local students averaged 14.1, consolidated students 13.1, and larger local 14.7. The difference between the last two groups was significant



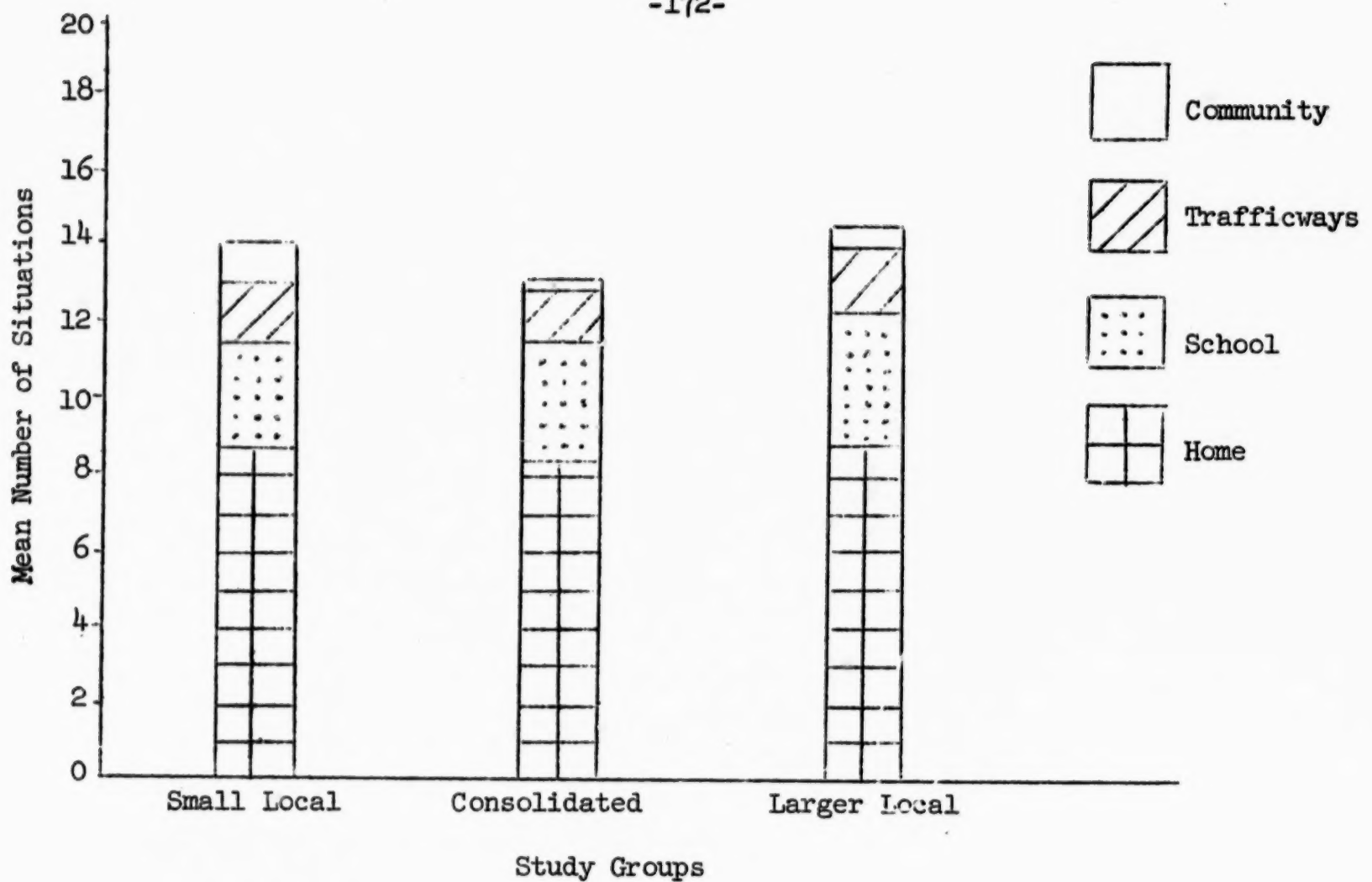


Figure 9.2 Participation in out-of-class situations during one day

beyond the .01 level. ( $F$  value=17.664) A classification of the situations according to locale (home, school, community and trafficways) revealed that (a) the larger local group entered more trafficway situations than did the other two groups (means were—small local 1.5; consolidated 1.4; larger local 1.9); (b) both the small local and the larger local groups entered more community situations than did the consolidated group (on the Sign test, the levels of significance were .01 and .05 respectively; means were—small local 1.1; consolidated 0.2; and larger local 0.7); and (c) no statistically significant differences were found with respect to home situations (means were 8.7, 8.2 and 8.9 respectively) or school situations (means were 2.8, 3.3 and 3.3 respectively).

These findings are summarized graphically in Figure 9.2 and again in the thumbnail accounts which follow.

1. Doreen Senior Girl, Upper Quartile in Intelligence, Student from the Small Local Group



The early morning was spent on personal activities and study within the home; the lunch hour was spent eating in the local cafe, strolling along the streets, and chatting in the school restroom; after school, Doreen travelled home, changed her clothes, went shopping in the town, prepared and ate a meal, studied, watched television and went to bed.

2. Jennifer Senior Girl, Upper Quartile in Intelligence, Student from the Consolidated Group

Jennifer's early morning was spent in much the same way as Doreen's although she had to leave home earlier in order to travel 40 minutes by bus to school; before school started she chatted in the gymnasium with her friends, and, at lunch time, in addition to eating in the cafeteria, she danced in the teenroom; after school she waited for the bus, travelled home, talked, studied, did her chores, watched television and went to bed.

3. Jane Senior Girl, Upper Quartile in Intelligence, Student from the Larger Local Group

In the early morning, Jane completed the usual personal activities, went to school earlier than did Doreen, and spent 25 minutes in and about the school; at lunch hour she ate in the school cafeteria and danced in the teenroom; after school she chatted with her friends in the gymnasium before strolling through the town; later in the evening she helped to prepare the supper, did her homework, watched television and went to bed.

The analysis based on situations was followed by one according to activities engaged in. A preliminary reading of the records suggested that these activities could be classified as follows:

1. Meals: breakfast, lunch, supper, snacks
2. Personal: washing, dressing, changing clothes, getting ready for bed, etc.
3. Chores: cleaning up the house, milking the cows, setting the table, doing the dishes, bathing younger siblings, etc.
4. Travel: to school, other
5. Talking: mainly face to face, but some telephone conversations as well
6. Studying: school work done at home, or at school before classes began or in the noon hour
7. Television: watching
8. Sports: competitive, spectator, playing (These were originally classified separately, but the amounts of time were so small that they were finally grouped together.)

9. Reading: recreational reading
10. Dancing: social and folk dancing
11. Radio: listening
12. Miscellaneous: clubs, religion, music, hobbies, resting, entertaining, excursions, writing letters, movies, shopping, waiting for the bus (Each of these was originally classified separately, but the counts were so small that they were finally grouped together in this catch-all category.)

We can discuss some of those activities fairly quickly, since, while they occupied a large amount of time, they tended to be favored equally by students in the three groups. Thus, watching television was, overall, the activity which accounted for more time than any other (mean times were 69, 78, and 85 minutes), and differences within groups were very much greater than those between groups. The same was true for chores (mean numbers of minutes were 69, 57, and 73), meals (mean times were 58, 65, and 65), personal activities (58, 63, and 60), and talking (35, 33, and 45). Another group of activities can be dismissed equally easily since they appeared to be of minor importance and, like the former set, revealed no intergroup differences. These included reading (most students did not mention this activity and mean times were 10, 7, and 4 minutes), dancing (seldom mentioned and mean times were 4, 2, and 4), and radio (5, 3, and 1 minutes).

Among the remaining five activities, travel to school and studying revealed the largest intergroup differences. It is not surprising, of course, that differences were found in the former of these. It is common knowledge that the removal of students from their own communities is likely to increase the amount of time which they spend travelling to school. In this study, consolidated students were found to spend, on an average, 79 minutes commuting to and from school, whereas those in the small local group spent 40, and those in the larger local 27. Highly significant differences were found between each pair.

F values: Groups 1 and 3—9.26 ( $< .01$ ); Groups 1 and 2—58.94 ( $< .01$ ); Groups 2 and 3—81.745 ( $< .01$ ).

These findings show the importance of consolidation in increasing travel time, but, in addition, they suggest that in a small community some students are inevitably faced with a considerable amount of travelling, whereas in a community with a greater population a higher proportion of students are likely to be within walking distance of the school. (Median distances from school were: small local— $2\frac{1}{2}$  miles; consolidated—7 miles; larger local— $1\frac{1}{2}$  miles.) Indeed, as one would suspect, some of the students attending the small local school spent more time in travelling than did some of those who commuted from other communities.

In the case of travel to school, both consolidation and size of community appeared to be important. When we turn to examine studying, it is immediately obvious that some school variable is affecting the amount of time given to this, for both study groups from the larger school (consolidated and larger local) recorded almost identical times (80 and 81 minutes) whereas students from the small local schools recorded a mean figure which differed greatly (49 minutes).

F values: Groups 1 and 3—12.986 ( $<.01$ ); Groups 1 and 2—10.227 ( $<.01$ ).

Commuting and size of community do not appear to be influential in this case. In terms of our reasonable assumptions, we should infer that size of school is the important variable, but this does not seem particularly plausible. It is more likely that the difference between the larger school and the small local ones with respect to study practices is associated with school policy rather than with school size.

Other travel, sport, and miscellaneous activities appeared on a considerable proportion of the records, but, since in each case there were many instances in which they did not occur, it was decided to use a nonparametric technique (chi square) in testing for significant differences. When this was done in the case of other travel, small local students were found to differ from those in both the other groups by including a significantly greater number who reported at least some other travel. In each case,  $\chi^2 = 9.862$  ( $<.01$ ). Again, this finding



does not seem to be clearly associated with school size. Rather the smaller number of students from the larger local group reporting other travel arises from the fact that a greater number of them reside in the town and, as a result, did not need to travel for shopping, etc. On the other hand, the smaller number from the consolidated group reporting other travel arises from the fact that they did not participate in those activities which require travelling. Thus in one case, size of community appears to be important, and in the other, commuting seems to be at least a contributing factor.

In some respects sport differences resemble study ones, for here a school difference is found in favor of the small local schools. More students from these participated in sport activities, and the numbers from both Groups 2 and 3 were identical,  $\chi^2 = 11.394$  ( $< .01$ ), and yet size of school may not be the only factor. Rather one suspects a difference in school policy on participation in non-League sporting events (and this is where the students from the small local group scored). On the other hand, size is certainly a contributing factor, especially since as we have already seen this influences entry and penetration into extracurricular activities.

Students in the small local group reported significantly greater participation in miscellaneous activities than did those who were commuting,  $\chi^2 = 4.566$  ( $< .05$ ), but other intergroup differences were not statistically significant. This suggests that commuting limits the range of activities, and a comparison of the consolidated and larger local groups, where differences were just below the .05 level of significances, supports this. The daily round of life for the consolidated students appears to be more highly structured, with a greater concentration upon the big seven activities: study, travel to school, television, meals, personal activities, chores, and talking. They have less time for leisurely participation in excursions, hobbies, entertainment, music and the like. A somewhat similar picture emerged when a scope score for all activities was calculated,



although in this case there was no difference between consolidated and larger local students. Mean scores were: small local 8.5, consolidated 7.9, and larger local 7.9.

F values: Groups 1 and 2—4.555 ( $< .05$ ); Groups 1 and 3—25.184 ( $< .01$ ); Groups 2 and 3—ns.

These activity findings are summarized in Figure 9.3.

The out-of-class activities were distributed over seven distinct areas:

1. Own house: bedroom, bathroom, kitchen, dining room, etc.
2. Own yard or farm: backyard, farmyard, barn, front gate, etc.
3. Other houses or yards: homes of friends, relatives, etc.
4. Transportation: bus, car, truck, etc.
5. School: gymnasium, hall, teenroom, restroom, entrance, etc.
6. Own neighborhood: local streets, shops, roads, halls, etc.
7. Other neighborhoods: streets, shops, roads, halls, etc. elsewhere.

As the earlier discussion of situations would suggest, own house was the place in which the students spent most of their out-of-class time. Differences between groups with respect to this locale were not statistically significant (mean times were 288, 312 and 319 minutes), and the same applied to yard or farm (39, 25 and 32 minutes), school (91, 78 and 100 minutes), other houses or yards (10, 3 and 3 minutes) and other neighborhoods (1, 11 and 0 minutes).

As we have seen, time spent in various forms of transportation is not identical with time spent travelling to school, but in the case of consolidated and larger local students it is nearly so. Thus it is to be expected that the three groups will once again show marked differences, with larger local students reporting the least amount, and consolidated the greatest. Mean number of minutes were:

Small local 49, Consolidated 83, Larger local 29

F values: Groups 1 and 2—19.027 ( $< .01$ ); Groups 1 and 3—7.914 ( $< .01$ ); Groups 2 and 3—50.921 ( $< .01$ ).

Finally, as far as time spent in places is concerned, the consolidated students were found to spend less time in their own neighborhoods than either of the two local groups. Levels of significance on the Sign Test were:

Groups 1 and 2—( $< .02$ ); Groups 3 and 2—( $< .02$ ); Groups 1 and 3—ns.

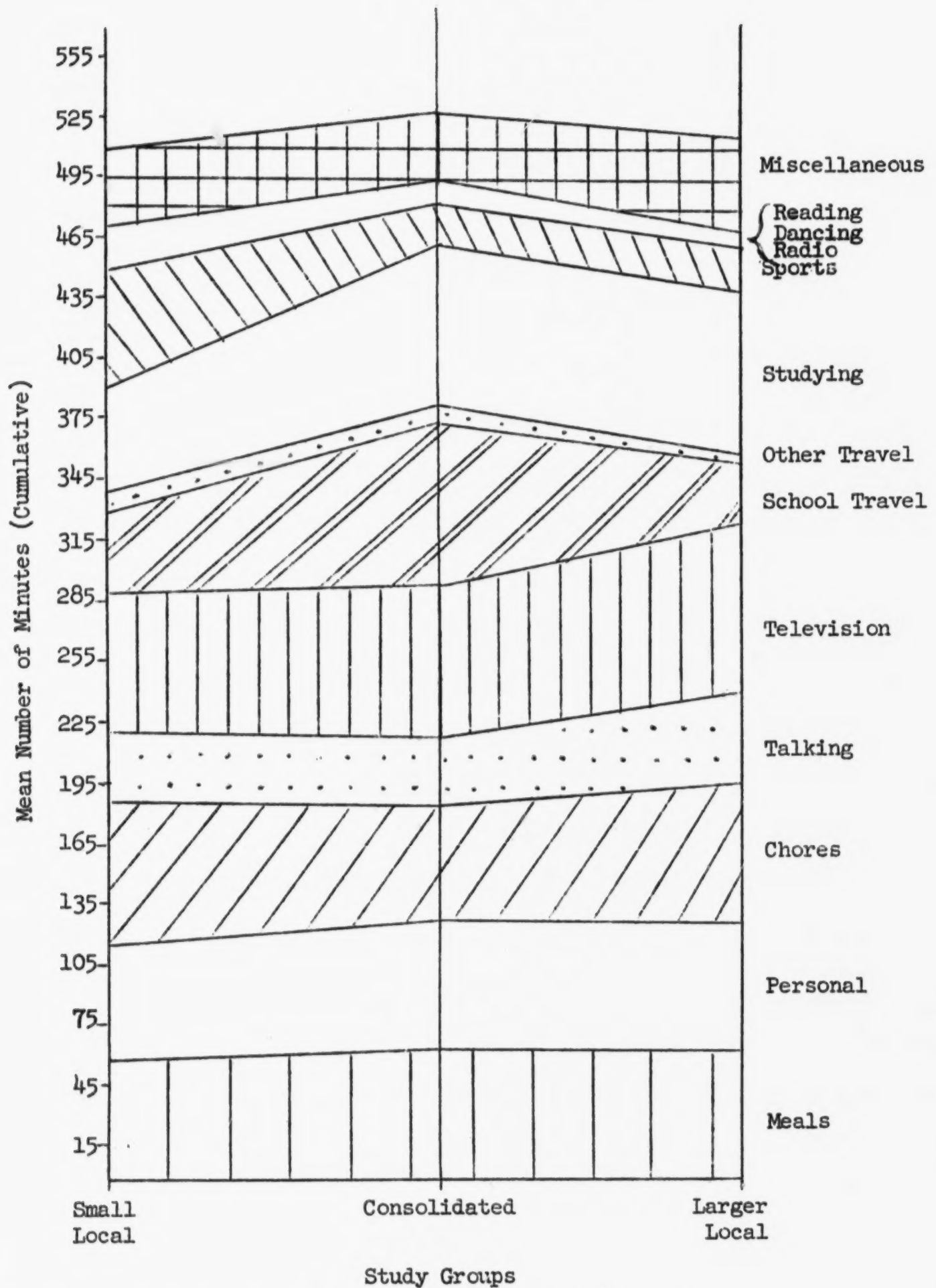


Figure 9.3 Round-of-life activities during one day

These findings on places are represented in Figure 9.4.

The final analysis that has been made in this study has been based upon the social groups involved in the situations. There were four main ones, or perhaps it is more accurate to say there were three, plus a state of aloneness.

1. Other family members: mother, father, siblings
2. Friends
3. Family members plus friends or other adults
4. Alone

Other family members featured prominently on the diary records of all students (mean times were 214, 191 and 233 minutes) although in the case of consolidated and larger-local groups a statistically significant difference appeared.  $F$  value = 5.901 ( $<.05$ ). The most plausible explanation here is probably associated with commuting, and the difference between small local and consolidated students, while not significant, provides some support.

Time spent with friends was also universally high (mean times were 149, 162 and 129 minutes), and, although the consolidated students had the highest average, differences were not statistically significant. Consolidated students also spent more time alone than did those in the other two groups (mean numbers of minutes were 118, 160 and 132), and in this case the difference between small local and consolidated students was statistically significant.  $F$  value = 5.393 ( $<.05$ ). No differences were found with respect to time spent with family and friends or other adults. These findings on social groups are shown in Figure 9.5.

Many of the experiential items surveyed in this round-of-life study appear to be unaffected by consolidation. In this category are: home situations, school situations; time spent on meals, personal, chores, talking, watching television, reading, and dancing, listening to the radio; time spent in own house, at school, in own yard or farm, in other houses and other neighborhoods; time spent with friends, and with family and friends together.

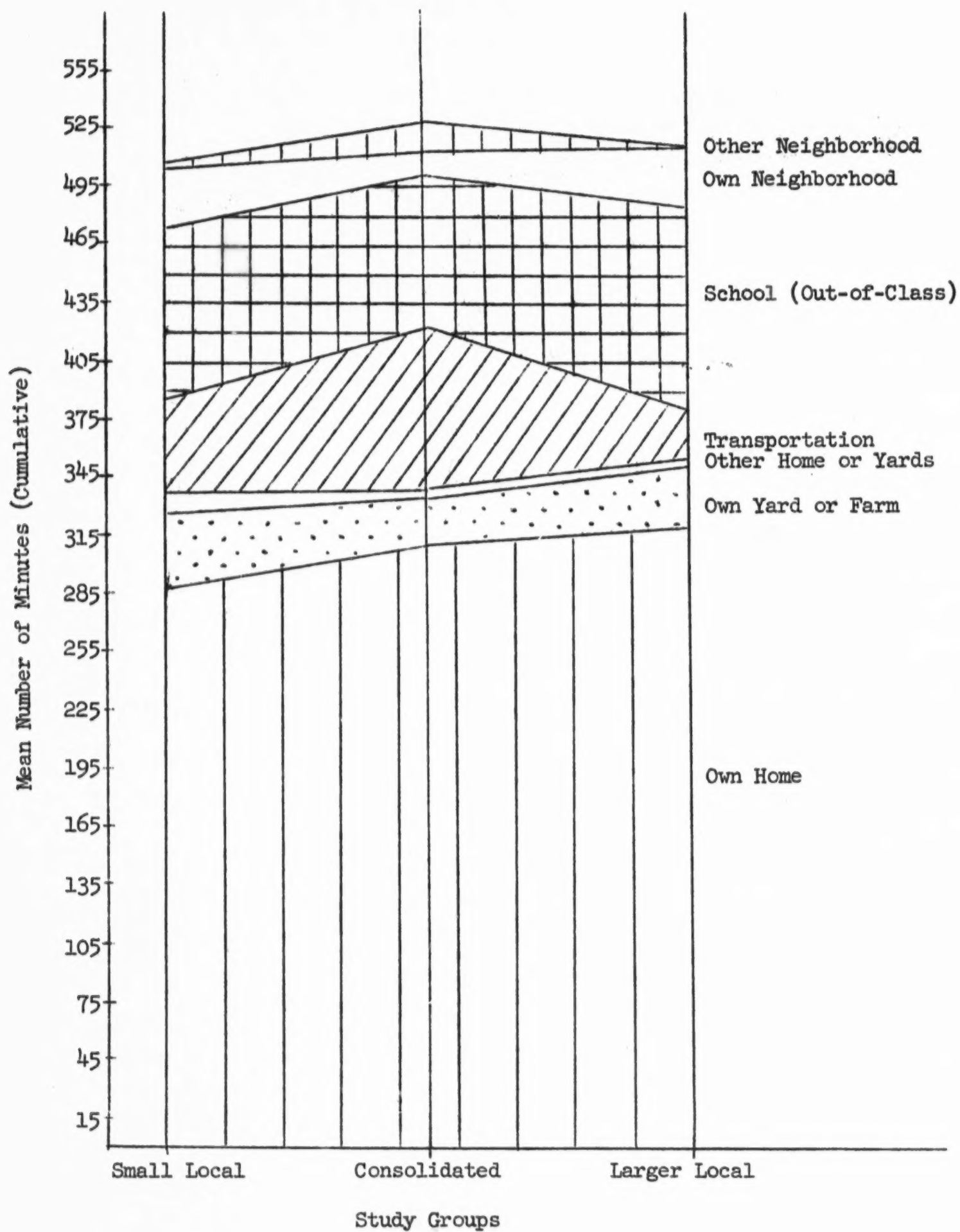


Figure 9.4 Round-of-life places during one day



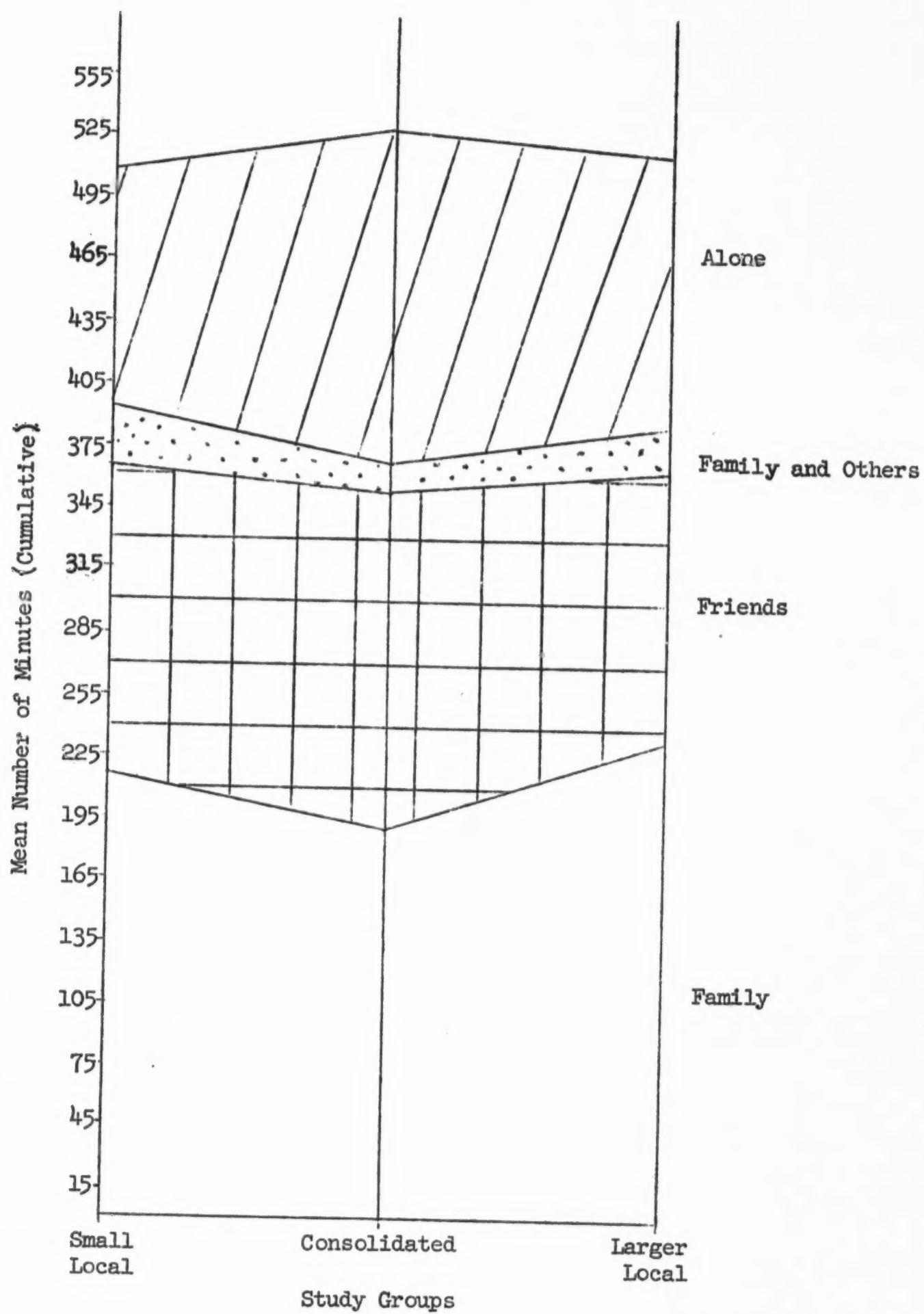


Figure 9.5 Round-of-life social groups during one day

On the other hand, statistically significant differences were found among the groups with respect to: total situations, traffic situations, and community situations; school travel, other travel, sports, study and miscellaneous activities; time spent in transportation, and own neighborhood; time spent with family and alone.

For at least three reasons these findings ought to be recognized as tentative and subject to confirmation: The time interval was short, the number of subjects was small, and among the experiences studied there were many in which no intergroup differences appeared. However, the evidence consistently supports two hypotheses:

(1) Consolidation leads to a decrease in neighborhood and community participations;

(2) Consolidation leads to a reduction in the variety of situations and activities.

#### Summary and Implications

##### Summary

This study of consolidation effects suggests that if the small local students were transferred to a County High School they would probably undergo the following changes in experiences.

- A decrease in:
1. external pressures aimed at increasing their participations in extracurricular activities (size of school effect)
  2. sense of personal responsibility associated with extracurricular activities (size of school effect)
  3. the number of school settings penetrated to the performance level (size of school effect)
  4. the range of super-variety settings penetrated (size of school effect)
  5. the number of school settings judged to be most worthwhile (size of school effect)
  6. number of satisfactions associated with physical well-being, acquiring knowledge and developing intellectual interests, developing a self-concept, and zest for living (size of school effect)

7. neighborhood and community participations (commuting effect)
8. the range of out-of-class situations and activities (commuting effect)

An increase in: 1. the number of school settings penetrated to the entry level

#### Implications

This is quite an impressive list of changes but one wonders what effect they would have upon the growth and development of the students. Here we must leave the comfort and security of our research findings and venture out into a realm which is still largely uncharted.

#### External Pressures Aimed at Increasing Extracurricular Participation.

The finding that students in the small local schools experience more external pressures would seem to have important implications for the development of primary status. In the early years of life, a sense of security, worth and importance is gained largely through membership within the family, but sooner or later the child must cast aside this support and establish himself as a worthy, independent being. The school can make a useful contribution here by fostering feelings of success and mastery within the formal curriculum, but many students are likely to derive their patterns of security, adequacy and other ego attributes in the more informal extracurricular activities. It is here that the small local schools have an important advantage, for whether weak, inept or merely young, each member really is important; often the activities cannot continue without his participation. Thus one would speculate that the increased external pressures would enhance the development of primary status among the students in the small local school. This enhancement, in its turn, could be expected to foster development in most other areas.

#### Sense of Personal Responsibility Associated with Extracurricular Activities.

Again we can speculate on the developmental implications of the heightened sense of personal responsibility that the small local students appear to have in connection with extracurricular activities; it might, for example, foster the development of an adequate self-concept. Nevertheless, here we seem to be dealing with a different order of phenomenon, not an experience, in the sense that external pressures were experiences, but rather an index of development. In our society a child is expected to progress from a state of egocentrism toward one in which due attention is given to the welfare of an ever-widening circle of individuals and groups. Thus he learns, or is expected to learn, respect for the interests of family, peer-group, school, church, community, nation and human race in roughly that sequence, and he is expected, too, to contribute to these groups according to his abilities. To the extent that the small local students were more conscious of responsibilities of this kind, we can hypothesize greater maturity on their part.

### Penetration of School Settings.

If an entry penetration (for example, "listening," "watching" etc.) is rated equal with a performance one (for example, "spoke to the meeting," "acted in the play" etc.) we could expect students to benefit from attendance at a larger school. However, without underestimating the value of watching, or listening to, high-quality performances (and performances at the larger school are likely to be of a higher quality), the research on child development overwhelmingly endorses the view that more active participation is of greater value. In general, it is better to speak than listen, to play than watch, to contribute actively rather than to sit passively, and it is surely no coincidence that the small local students report greater satisfaction with school settings, and in particular, mention more values associated with physical well-being, acquisition of knowledge, development of a self-concept, and plain enjoyment. These are some of the characteristics which we would expect to be fostered by the increased performances, and the reporting of these by the students increases the confidence which can be placed in the expectations.

### Variety of Settings, Situations and Activities.

In the previous paragraph we have commented upon the penetration levels of the settings and upon the values gained. A somewhat similar item among the list of changes is that concerned with the range of different kinds of settings, situations, and activities. In general (although this generalization, like the earlier ones, could be pushed too far) students benefit in a large number of ways through active participation in a variety of activities. Thus, in most cases, one gets more enjoyment, develops a keener self-concept, and receives greater all-round stimulation if one participates in varied activities rather than concentrates upon one, or upon those that are alike. The small local students are not allowed to be selective; versatility is prized more than specialization. The consolidated students, on the other hand, spend their time mainly on the big seven activities, and participate less frequently in clubs, music, hobbies, excursions and the like. These miscellaneous activities can be particularly beneficial since they very often provide an opportunity for the student to enact behaviors which he finds especially congenial.

These findings suggest that the current assumption of consolidated school superiority, is, in at least some aspects, like the first report of Mark Twain's death—exaggerated. If we discount the Canute-like act of trying to halt the consolidation wave, two main courses are open to us. One is to take the advantages of the consolidated school to the small rural high school, and the other is to take the advantages of the small school to the consolidated one. Our research makes no contribution to the former of these programs, but it does seem to have certain implications for the latter.

In broad terms, the effects of consolidation demand special efforts from both the school and the local community. Through its structural organization, its



instructional procedures, and its extracurricular activities, the larger school needs to insure that all its students participate actively and acquire a genuine sense of attachment and contribution to group goals. There is a temptation in a larger school to concentrate upon extracurricular goals and standards, which can be achieved by only the most talented students, at the expense of the rest. Similarly the "consolidated community" must take special pains to so arrange its recreational programs and community tasks that its young members are appropriately challenged and stimulated. Once consolidation has taken place, there is a temptation for the community to discard some of its obligations to its adolescents, whereas the data presented here suggest the need for a still more determined effort to meet those obligations.

## CHAPTER 10

### Employment and Out-of-School Activities of High School Students in Communities Differing in Size

Roger G. Barker

Behavior settings that provide an opportunity for young people to participate in the business, government and religious life of a community are widely thought to have educational values. This is specifically recognized, for example, by apprenticeship, internship and school-work programs. But most education of this kind is not formally arranged, it is a consequence of youth's place within the larger community. Little is known about educational opportunities of these sorts, and how they vary between localities. We have investigated aspects of this problem in four small towns of Midwest County (Walker, Malden, Midwest, and Vernon) and in neighboring University City and Capital City. The communities are identified in Chapter 4, and studies of their schools are reported in Chapters 6, 7, and 8. The four towns of Midwest County had populations ranging from 450 to 1150, with a total population of 2888; University City had 23,296, and Capital City 101,155 inhabitants.

Two studies are reported. Both were concerned with the extent to which adolescents were responsible participants in public, nonschool behavior settings of the towns and cities. The independent variable of the first study was a sample of business and professional behavior settings; the dependent variable was the number of adolescents who participated in serious, responsible work within them. The independent variable of the second study was a sample of adolescents and the dependent variable the number of nonschool behavior settings in which they participated.

7

Employment Opportunities for Adolescents in University City  
and in the Towns of Midwest County

In 1958-59 there were 267 behavior settings in the four Midwest County towns where business and professional activities occurred. This number did not include settings whose primary function was the welfare of children and adolescents, such as school classes; and it did not include one-person business behavior settings, e.g., James Jones, Painter. The settings were discovered by means of complete community surveys as described by Barker and Wright (1955), and the settings were classified according to the varieties identified by them. The complete roster of the 267 business and professional settings present in the four small towns were included in the study.

A comparable sample of the behavior settings of University City was secured in the following way:

All behavior settings of each variety occurring among the 267 settings in the Midwest towns were identified in University City. To these were added all business and professional settings of varieties not present in the towns of Midwest County. In all, 938 business and professional behavior settings were identified in University City. Data concerning employment of adolescents were secured from a sample of these settings by selecting at random 15 per cent of the settings (to the nearest whole number) in every variety containing eleven or more settings, and by selecting at random one setting from every variety containing fewer than eleven settings. In this way, every variety of behavior setting in the Midwest list was represented in the University City list by at least a 15 per cent sample of all the settings in the variety; in addition, all behavior setting varieties unique to University City were included. The behavior settings finally selected for study were a 21 per cent sample of the business and professional settings of University City. These settings were identified, via the University City telephone directory and the 1960 Cross Reference for University City compiled by the local Credit Bureau. As the field work proceeded, settings not discovered in either directory were added. Very few settings were added in this way, some were deleted because they no longer existed.

Information regarding ~~the~~ employment of adolescents in the behavior settings selected for study was obtained by interviewing the person in charge of each of them. Data secured from the answers to the following questions are reported here:

Is high school help used here at all now or during the past year? (Sept., 1959-July, 1960)

If the answer was affirmative to this question, the following questions were asked:

How many high school students are employed at one time?

How many different high school students were employed during the past year?

How many different people were employed here last year?

Interviews were done in the month of July, 1960.

The behavior setting varieties involved in the study and number of settings in each are reported in Appendix 10.1. It should be noted that no distinction was made between full and part-time employment.

The data are reported in Table 10.1. They show that high school employees were found in 27 per cent and 28 per cent of the behavior settings of the towns and the city respectively; i.e., in both cases just over one-quarter of the business and professional settings used adolescent help. Within the behavior settings which employed adolescents the following held: (1) there were about 50 per cent more adolescent employees in the city settings than in the town settings; nevertheless, because of their still greater total number of employees, (2) adolescent employees constituted 15 per cent of the working force of the city settings and 28 per cent of the working force of the town settings. If the 938 business and professional settings in University City employed high school students at the same rate as the settings in the sample, as is to be expected, adolescents constituted  $.27 \times .28 = .075$  of Midwest's total working force in these settings, and  $.28 \times .15 = .040$  of University City's working force. Relative to all positions in business and professional behavior settings, positions for adolescents in these settings were 187 per cent more frequent in the towns than in the city.

The business and professional behavior settings of University City which employed adolescent workers generated one full-or part-time adolescent position for every 6.5 positions within them, and Midwest County settings generated a high school position for every 3.5 positions. University City provided one employment possibility for adolescents within its business and professional



Table 10.1 Employment of adolescents in business and professional behavior settings in four Midwest County Towns and in University City

|                                                                                           | Midwest<br>County | University<br>City |
|-------------------------------------------------------------------------------------------|-------------------|--------------------|
| Number of business and professional behavior settings                                     | 267               | 938                |
| Number of behavior settings in sample                                                     | 267               | 195                |
| Behavior settings employing adolescents                                                   |                   |                    |
| Number of behavior settings                                                               | 73                | 55                 |
| Per cent of sample of behavior settings                                                   | 27                | 28                 |
| Adolescents employed at time of interview                                                 |                   |                    |
| Number of adolescents                                                                     | 95                | 105                |
| Mean number per behavior setting employing adolescents                                    | 1.3               | 1.9                |
| Total adolescents employed during year                                                    |                   |                    |
| Number of adolescents                                                                     | 147               | 155                |
| Mean number per behavior setting employing adolescents                                    | 2.0               | 2.8                |
| Total persons employed during year (behavior settings employing adolescents)              |                   |                    |
| Number of persons                                                                         | 516               | 1006               |
| Mean number per behavior setting employing adolescents                                    | 7.1               | 18.3               |
| Per cent of all employees of behavior settings employing adolescents who were adolescents | 28                | 15                 |

settings for every 33 of its inhabitants, and the towns provided one employment possibility for an adolescent for every 20 of their inhabitants. Relative to total community population, positions for adolescents in business and professional settings were 167 per cent more frequent in Midwest towns than in University City.

Data for settings with comparable numbers of employees in the towns and the city are given in Table 10.2. From these data it appears that the greater rate of adolescent employment within the small towns occurred for settings of all sizes.

The different varieties of behavior settings reporting high school employees in the towns of Midwest County and in University City are in Table 10.3. It is obvious that adolescents were not restricted to a limited variety of work situations in either the towns or the city: 26 town varieties and 24 city varieties reported using high school help, 37 varieties in all. Thirteen varieties were common to the towns and the city, 13 were unique to the towns and 11 were unique to the city. The data are given in Table 10.3.

The evidence we have secured indicates that the responsible participation of adolescents was as widely distributed among the business and professional behavior settings of the city as of the towns, but that within the settings, adolescent employees were relatively less numerous in the city settings. The data show, too, that jobs for adolescents were less frequent relative to the total community population in the city than in the towns.

Employment, Church, and Nonschool  
Social Activities of High School Junior Students in  
Capital City and in Four Towns of Midwest County

The high school students involved in the studies reported in Chapters 6, 7, and 8 of this report were asked three questions about their out-of-school activities. See Appendix 6.1 for complete report form. The items which elicited this information were as follows:

Table 10.2 Number<sup>1</sup> of adolescent employees in behavior settings with varying total numbers of employees

| Total number<br>of employees of<br>behavior setting | Midwest County Towns                                             |                                                       | University City                                                  |                                                       |
|-----------------------------------------------------|------------------------------------------------------------------|-------------------------------------------------------|------------------------------------------------------------------|-------------------------------------------------------|
|                                                     | No. of set-<br>tings with<br>designated<br>no. of em-<br>ployees | Mean no. of<br>adolescent<br>employees per<br>setting | No. of set-<br>tings with<br>designated<br>no. of em-<br>ployees | Mean no. of<br>adolescent<br>employees per<br>setting |
| 3                                                   | 15                                                               | 1.2                                                   | 6                                                                | 1.0                                                   |
| 4                                                   | 10                                                               | 2.0                                                   | 6                                                                | 1.1                                                   |
| 5                                                   | 14                                                               | 1.6                                                   | 6                                                                | 1.3                                                   |
| 6                                                   | 3                                                                | 1.3                                                   | 3                                                                | 1.6                                                   |
| 7                                                   | 7                                                                | 1.7                                                   | 5                                                                | 1.4                                                   |
| 8                                                   | 5                                                                | 3.0                                                   | 1                                                                | 1.0                                                   |
|                                                     | 6                                                                | 3.1                                                   | 2                                                                | 2.0                                                   |
| 10                                                  | 5                                                                | 2.6                                                   | 4                                                                | 2.0                                                   |
| 11+a                                                | 6                                                                | 5.8                                                   | 7                                                                | 4.3                                                   |

<sup>a</sup>The Midwest behavior settings in this class had total employees as follows: 11, 11, 16, 24, 35, 54; the University City behavior settings which most closely matched these had total employees as follows: 11, 12, 16, 23, 27, 28, 100.

Table 10.3 Varieties of behavior settings using high school help in Midwest County and University City

| Variety Number | Variety Name                                                  | X—Uses High School Help |                 |
|----------------|---------------------------------------------------------------|-------------------------|-----------------|
|                |                                                               | Midwest County          | University City |
| 3              | Attorneys and Real Estate Offices                             | x                       | x               |
| 5              | Auctions, Livestock                                           | -                       | x               |
| 6              | Banks                                                         | x                       | -               |
| 8              | <sup>a</sup> Book Stores                                      | -                       | x               |
| 9              | Builders and Builders' Suppliers                              | x                       | x               |
| 11             | Cemeteries                                                    | -                       | x               |
| 13             | Courts                                                        | x                       | x               |
| 14             | <sup>b</sup> Dairy Barns                                      | x                       | -               |
| 15             | Dances and Schools of Dancing                                 | -                       | x               |
| 18             | Doctors' Offices and Clinics                                  | x                       | -               |
| 19             | Drug and Department Stores                                    | x                       | x               |
| 27             | Factories                                                     | x                       | -               |
| 34             | Food and Feed Distributors                                    | x                       | x               |
| 37             | Funeral Homes                                                 | x                       | -               |
| 39             | Government, School, and Business Offices                      | x                       | x               |
| 42             | Hardware and Home Furnishers                                  | x                       | x               |
| 45             | Hospitals                                                     | -                       | x               |
| 46             | Hotels, Rooming Houses, and Nursing Homes                     | x                       | -               |
| 47             | Ice Companies                                                 | x                       | -               |
| 50             | Kennels                                                       | x                       | -               |
| 51             | Laundries and Cleaners                                        | -                       | x               |
| 52             | Libraries                                                     | x                       | x               |
| 53             | Meat Packing Companies                                        | x                       | -               |
| 59             | Motor Vehicle Sales and Service                               | x                       | x               |
| 60             | Movies                                                        | x                       | x               |
| 63             | Newspapers and Printers                                       | x                       | x               |
| 71             | Police Stations and Jails                                     | -                       | x               |
| 72             | Post Offices                                                  | x                       | -               |
| 80             | Restaurants and Taverns                                       | x                       | x               |
| 87             | Shoe Shops, Repair and Sale                                   | -                       | x               |
| 88             | <sup>b</sup> Slaughter Houses                                 | x                       | -               |
| 93             | Truck Lines, Heavy                                            | x                       | x               |
| 94             | Veterinarians                                                 | x                       | -               |
| 96             | Watch Repair and Jewelry Shops                                | x                       | -               |
| 98             | Water Plants                                                  | -                       | x               |
| 155            | <sup>a</sup> Music and Musical Instruments, Sales and Service | -                       | x               |
| 156            | <sup>a</sup> Office Supply Stores                             | -                       | x               |

<sup>a</sup>Varieties unique to University City

<sup>b</sup>Varieties unique to Midwest County towns



### Church Activities

Students sometimes take part in groups and organizations outside of school. Let's take church as one possibility. Students could attend Sunday School, Church, Mass, Synagogue, or Young People's Group Meeting, etc. They might be performers in some of these: sing in church choir, teach Sunday School, lead Young People's Worship Service, etc. If you took part in any church-related activities, this semester, would you write them in below? If you performed in any, please write in the performance.

### Organization Activities

Students might also take part in other organizations. Examples would be Scout meeting, Bowling Team contests, 4-H meetings, music group meetings, Rainbow girls party, etc. Students might be performers in some of these: serve as assistant scoutmaster, handle refreshments at club party, etc. Would you write in any of these affairs you have attended and put in any performances?

### Work

Have you worked for pay this semester?  
What kind of work did you do?  
If you worked, for a company, or organization, please name it:  
Did you work for pay last summer?  
What kind of work did you do?  
If you worked for a company or organization, please name it:

Information was secured by means of these questions from the 18 boys and 24 girls who were high school Junior students living within the town limits of the four Midwest County towns and from the 605 Capital City Junior students. Each Midwest student was matched with a Capital City Junior of the same sex, race, and IQ. Selection from among the Capital City subjects who matched Midwest County subjects on the three variables was done via random numbers. The data were collected on Dec. 12-15, 1960.

### Employment Reported by Midwest County and Capital City Subjects

Employment which the subjects reported is presented in terms of two categories:

- (a) employment in business and professional behavior settings equivalent to those involved in the survey of Midwest County and University City (reported above),
- (b) employment in all other settings.

The latter category is called "odd jobs" in the tables and discussion; "baby sitting" was most common odd job reported by the girls, and lawn work and paper delivery by

the boys. A position is employment reported by one subject in a business or professional behavior setting or an odd job. For example, the subject who reported "street work for the city" and "stocked shelves at Smith's Supermarket," reported two positions; the same is true of the subject who reported "baby sitting" and "worked in jewelry store."

The data regarding employment are presented in Table 10.4.

These data show that the Midwest County students when questioned regarding their work experience in December, 1960 confirmed, in general, the data on employment obtained in the Midwest towns via the behavior setting survey in 1959 and reported above. That survey identified 147 positions for adolescents in business and professional behavior settings (see Table 10.1). In the direct questioning of the high school Juniors, employment in 31 business and professional positions was reported. The informants who constituted about 25 per cent of the high school students of the towns reported filling 21 per cent as many positions as had been identified by the survey.

The direct data and the behavior setting survey data were also in accord in discovering more positions for adolescents in the business and professional behavior settings of the small towns than in those of the city, in this case, Capital City. The high school Juniors of Midwest County towns reported filling 31 positions during the summer and autumn in business and professional settings; the Juniors of Capital City reported filling 22 positions (Table 10.4, line 3). The same direction and order of difference occurred in the number of "odd jobs" reported (line 4), in the total number of positions reported (line 2), and in the number of subjects reporting employment (line 5).

The city-town difference in the employment of high school Junior students was limited almost entirely to the boys. All Midwest County boys were employed, and they reported 2.2 times the number of positions as the Capital City boys; but equal numbers of Midwest County and Capital City girls reported employment

Table 10.4 Employment reported by Midwest County and Capital City High School Junior students: Summer and Autumn 1960

|                                                      | Midwest County | Capital City |
|------------------------------------------------------|----------------|--------------|
| All Subjects                                         |                |              |
| 1. Number of subjects reporting                      | 42             | 42           |
| 2. Number of positions reported                      | 45             | 31           |
| 3. Positions in business and professional settings   | 31             | 22           |
| 4. Positions in other settings (odd jobs)            | 14             | 9            |
| 5. Number of subjects reporting employment           | 35             | 29           |
| 6. Employment in business and professional settings  | 23             | 21           |
| 7. Employment in other settings only (odd jobs)      | 12             | 8            |
| 8. Number of subjects reporting no employment        | 7              | 13           |
| Boys                                                 |                |              |
| 9. Number of subjects reporting                      | 18             | 18           |
| 10. Number of positions reported                     | 26             | 12           |
| 11. Positions in business and professional settings  | 25             | 9            |
| 12. Positions in other settings (odd jobs)           | 1              | 3            |
| 13. Number of boys reporting employment              | 18             | 12           |
| 14. Employment in business and professional settings | 17             | 9            |
| 15. Employment in other settings only (odd jobs)     | 1              | 3            |
| 16. Number of boys reporting no employment           | 0              | 6            |
| Girls                                                |                |              |
| 17. Number of subjects reporting                     | 24             | 24           |
| 18. Number of positions reported                     | 19             | 19           |
| 19. Positions in business and professional settings  | 6              | 13           |
| 20. Positions in other settings (odd jobs)           | 13             | 6            |
| 21. Number of girls reporting employment             | 17             | 17           |
| 22. Employment in business and professional settings | 6              | 12           |
| 23. Employment in other settings only (odd jobs)     | 11             | 5            |
| 24. Number of girls reporting no employment          | 7              | 7            |

Table 10.5 Varieties of business and professional behavior settings where employment was reported by Midwest County and Capital City High School Juniors

| Variety Number | Variety Name                                                  | X--Employment Reported in |                 |
|----------------|---------------------------------------------------------------|---------------------------|-----------------|
|                |                                                               | Midwest<br>County         | Capital<br>City |
| 6              | Banks                                                         | x                         | -               |
| 9              | Builders and Builders' Suppliers                              | x                         | x               |
| 15             | Dances and Schools of Dancing                                 | -                         | x               |
| 18             | Doctors' Offices and Clinics                                  | x                         | -               |
| 19             | Drug and Department Stores                                    | x                         | x               |
| 27             | Factories                                                     | -                         | x               |
| 34             | Food and Feed Distributors                                    | x                         | -               |
| 39             | Government, School, and Business Offices                      | x                         | x               |
| 42             | Hardware and Home Furnishers                                  | x                         | x               |
| 46             | Hotels, Rooming Houses, and Nursing Homes                     | x                         | -               |
| 52             | Libraries                                                     | -                         | x               |
| 59             | Motor Vehicle Sales and Service                               | x                         | -               |
| 80             | Restaurants and Taverns                                       | -                         | x               |
| 93             | Truck Lines, Heavy                                            | x                         | -               |
| 96             | Watch Repair and Jewelry Shops                                | x                         | -               |
| 155            | <sup>a</sup> Music and Musical Instruments, Sales and Service | -                         | x               |
| 162            | <sup>a</sup> Day Nurseries                                    | -                         | x               |
| 163            | <sup>a</sup> Swimming Pools                                   | -                         | x               |
|                | <sup>b</sup> Farms                                            | x                         | -               |

<sup>a</sup>Varieties unique to Capital City

<sup>b</sup>Varieties unique to Midwest County



and they reported identical numbers of positions. The Midwest County girls reported half as many positions in business and professional settings as the Capital City girls.

The varieties of business and professional behavior settings within which the subjects reported employment are listed in Table 10.5. There are 19 varieties in the list, four are common to the Midwest County and Capital City subjects, seven are unique to the Midwest County students, and eight unique to the Capital City students.

#### Church Activities Reported by Midwest County and Capital City Subjects

An activity in a church organization is participation reported by one subject in one behavior setting. "Attended Sunday School and Church" constitutes two activities. Performance and attendance are treated separately: a performance involves filling a position of some responsibility within a behavior setting, such as teacher, chairman, or singer; it is more important to the functioning of the setting than simple attendance.

Data on participation in church-connected activities are presented in Table 10.6. The Midwest County Juniors reported more church activities (line 2), both performances (line 3), and attendances (line 4), than Capital City Juniors; and more of the Midwest subjects reported some church-connected activities (line 5) and some performances (line 6) than did Capital City Juniors. This was true for both the boys and the girls with one exception: equal numbers of Midwest County and Capital City girls engaged in some church activity (line 21).

#### Out-of-School Social Organization Activities Reported by Midwest County and Capital City Subjects

The criteria of an activity in a nonschool social organization are the same as for an activity in a church organization.

Table 10.6 Church and out-of-school-social organization activities reported by Midwest County and Capital City High School Junior students

|                                               | Church Activities |              | Social Organization Activities |              |
|-----------------------------------------------|-------------------|--------------|--------------------------------|--------------|
|                                               | Midwest County    | Capital City | Midwest County                 | Capital City |
| All Subjects                                  |                   |              |                                |              |
| 1. Number of subjects                         | 42                | 42           | 42                             | 42           |
| 2. Number of different activities reported    | 87                | 56           | 28                             | 21           |
| 3. Number of performances                     | 36                | 17           | 16                             | 10           |
| 4. Number of attendances, only                | 51                | 39           | 12                             | 11           |
| 5. Number of subjects reporting activities    | 28                | 24           | 16                             | 15           |
| 6. Number reporting performances              | 21                | 11           | 14                             | 8            |
| 7. Number reporting attendance only           | 7                 | 13           | 2                              | 7            |
| 8. Number of subjects reporting no activities | 14                | 18           | 26                             | 27           |
| Boys                                          |                   |              |                                |              |
| 9. Number of subjects                         | 18                | 18           | 18                             | 18           |
| 10. Number of different activities reported   | 27                | 15           | 15                             | 10           |
| 11. Number of performances                    | 9                 | 3            | 9                              | 7            |
| 12. Number of attendances, only               | 18                | 12           | 6                              | 3            |
| 13. Number of boys reporting activities       | 9                 | 5            | 8                              | 6            |
| 14. Number reporting performances             | 6                 | 2            | 8                              | 5            |
| 15. Number reporting attendance only          | 3                 | 3            | 0                              | 1            |
| 16. Number of boys reporting no activities    | 9                 | 13           | 10                             | 12           |
| Girls                                         |                   |              |                                |              |
| 17. Number of subjects                        | 24                | 24           | 24                             | 24           |
| 18. Number of different activities reported   | 60                | 41           | 13                             | 11           |
| 19. Number of performances                    | 27                | 14           | 7                              | 3            |
| 20. Number of attendances                     | 33                | 27           | 6                              | 8            |
| 21. Number of different girls reporting acts. | 19                | 19           | 8                              | 9            |
| 22. Number reporting performances             | 15                | 9            | 6                              | 3            |
| 23. Number reporting attendance only          | 4                 | 10           | 2                              | 6            |
| 24. Number of girls reporting no activities   | 5                 | 5            | 16                             | 15           |

Data on participation in out-of-school social organizations are given in Table 10.6. They provide a picture of differences in the participation of town and city adolescents that is very similar to that for church activities. More of the Midwest County high school Juniors engaged in more activities within social organizations not connected with the school than did Capital City Juniors.

Community Activities in Town and City

We have computed a community activity index for each subject by rating his activities in employment, church, and social settings as follows:

| <u>Employment Rating</u>        |   | <u>Church Rating</u> |   | <u>Social Org. Rating</u> |   |
|---------------------------------|---|----------------------|---|---------------------------|---|
| No employment                   | 0 | No attendance        | 0 | No attendance             | 0 |
| Odd job, summer                 | 2 | Attendance, only     | 1 | Attendance, only          | 1 |
| Odd job, autumn                 | 2 | Performance          | 3 | Performance               | 3 |
| Bus. & Prof. setting,<br>summer | 4 |                      |   |                           |   |
| Bus. & Prof. setting,<br>autumn | 4 |                      |   |                           |   |

Each different job, church activity, and social activity reported by a subject was rated according to these scales. For example, a subject who worked as a mechanic (4) and as a janitor (4) in the summer, and at odd jobs in the autumn (2) received an employment rating of 10, the sum of the separate activity ratings, which are given in the parentheses. A subject who attended church (1), was Sunday School secretary (3), and was a member of the youth fellowship (1) received a church activity rating of 5. The community activity index for a subject was the sum of the three separate ratings.

Employment ratings of individual subjects actually varied from 0 to 12, church ratings varied from 0 to 11, and social ratings varied from 0 to 7. The separate credits given for summer and autumn employment, and the rating of work in business and professional settings as 4 instead of 3, as performances in church and social organizations were rated, amounted to weighting employment activities

considerably higher than either of the other activities. This appeared to be in accord with both the time devoted to employment and to the importance attached to employment by the community as a whole and by the adolescents themselves.

The mean community activity indexes are presented in Table 10.7.

Table 10.7 Mean community activity indexes

|       | Midwest County | Capital City | Total |
|-------|----------------|--------------|-------|
| Boys  | 12.00          | 5.61         | 8.81  |
| Girls | 9.29           | 7.08         | 9.36  |
| Total | 10.45          | 6.45         |       |

An analysis of variance showed that the difference between the Midwest County and Capital City ratings when the total distributions were considered was significant at the  $p < .01$  level. The subgroup differences (Midwest boys vs. Capital City boys, Midwest girls vs. Capital City girls, and boys vs. girls) did not reach acceptable levels of significance. It is of some interest to note, however, that although the mean community activity indexes were greater in Midwest County for both boys and girls, the index of the Midwest boys exceeded that of the girls while the reverse was true in Capital City. This constitutes a slight suggestion that extraschool community life may have been richer for boys in the towns and for girls in the city.

The differences in community activity can be made more concrete, perhaps, by presenting the activities reported by subjects whose ratings fell near to the mean ratings of their class:

Midwest County girl: Taught Sunday School  
Sang in church choir  
Was member of girl scouts  
Did summer baby sitting

Capital City girl: Was church youth group leader  
Day nursery aid, summer



Midwest boy: Sang in church choir  
Member, Explorer Scouts  
Clerked in grocery store, summer and autumn

Capital City boy: Attended Sunday school and youth group  
Clerked in auto supply store, summer

These findings and those concerning employment in University City and Midwest County agree in indicating that the adolescents of Midwest County towns participated more widely than those of neighboring cities in out-of-school activities which are widely presumed to have potential educational values.

The wider participation of adolescents in the behavior settings of the towns is in line with the theory of behavior settings, namely, that among equivalent settings which differ in number of inhabitants, the settings with the smaller number of inhabitants will, on the average, exert a greater claim over potential inhabitants, including marginal inhabitants such as adolescents. Herein, too, resides a hypothesized greater educational value of participation in small rather than in large behavior settings. According to this hypothesis, employment and performance in small settings involve a reciprocal, axiological relationship between participant and setting that is inevitably reduced as the number of participants increase. The employee or performer who contributes something of value to the maintenance of the setting, receives from the setting something of value to the person. If the person's action is not important to the setting, it is unlikely to be important to him. A condition of personal achievement, self-esteem and psychological success is the completion of difficult and important actions; filling an essential, responsible position within a serious community setting constitutes an important and often a difficult action.

For these reasons it has seemed to us important to investigate further the place of adolescents within small towns. We have done this in the case of Midwest County adolescents, and turn to this study next.

## CHAPTER 11

### The Place of Adolescents in the Towns of Midwest County

Roger G. Barker

William F. LeCompte

The investigations presented in the preceding chapters of this report discovered that the high school students of the small towns participated in more responsible positions within the nonclass behavior settings of the schools and that they engaged in church, social, and employment activities outside the schools more frequently, on the average, than the high school students of the cities. It appeared desirable, therefore, to investigate more systematically the place of adolescents in the small towns of the main studies. We do not have comparable data for the adolescents of the cities we have studied; the data to be presented here rounds out the picture of small town adolescent life.

In this study we have included all persons of high school age (14 through 17 years) within four towns of Midwest County. The method has been to determine the place of adolescents in all the community behavior settings of the towns. To accomplish this, the K-21 behavior settings of Malden, Midwest, Vernon, and Walker were identified by means of behavior setting surveys, as described by Barker and Wright (1955). Pertinent demographic data regarding the towns are reported in Chapter 4, and Appendix 11.1 lists the number of behavior settings in each Variety in each town. In the present connection, it is important to know that the towns were small (population 450 to 1150), that each had a complete local school system, including a high school, and that the average number of persons per community behavior setting was low, ranging from 1.2 to 1.83. This means, according to the theory of behavior settings, that people were in short supply relative to the number of settings and relative to the number of jobs to be done in the settings.

### Territorial and Performance Ranges of High School Adolescents

We first investigated the extent and quality of adolescent participation in the behavior settings of the towns. The territorial range of an age group refers to the number of a town's behavior settings entered in any capacity by one or more members of an age group. Chi square tests showed that the towns of Midwest County did not differ in the territorial ranges of inhabitants of designated ages, hence the data for the four towns were combined for the total number of 2005 community behavior settings. (This figure omits 44 behavior settings in which there were no performers, e.g., Vacant Lots.)

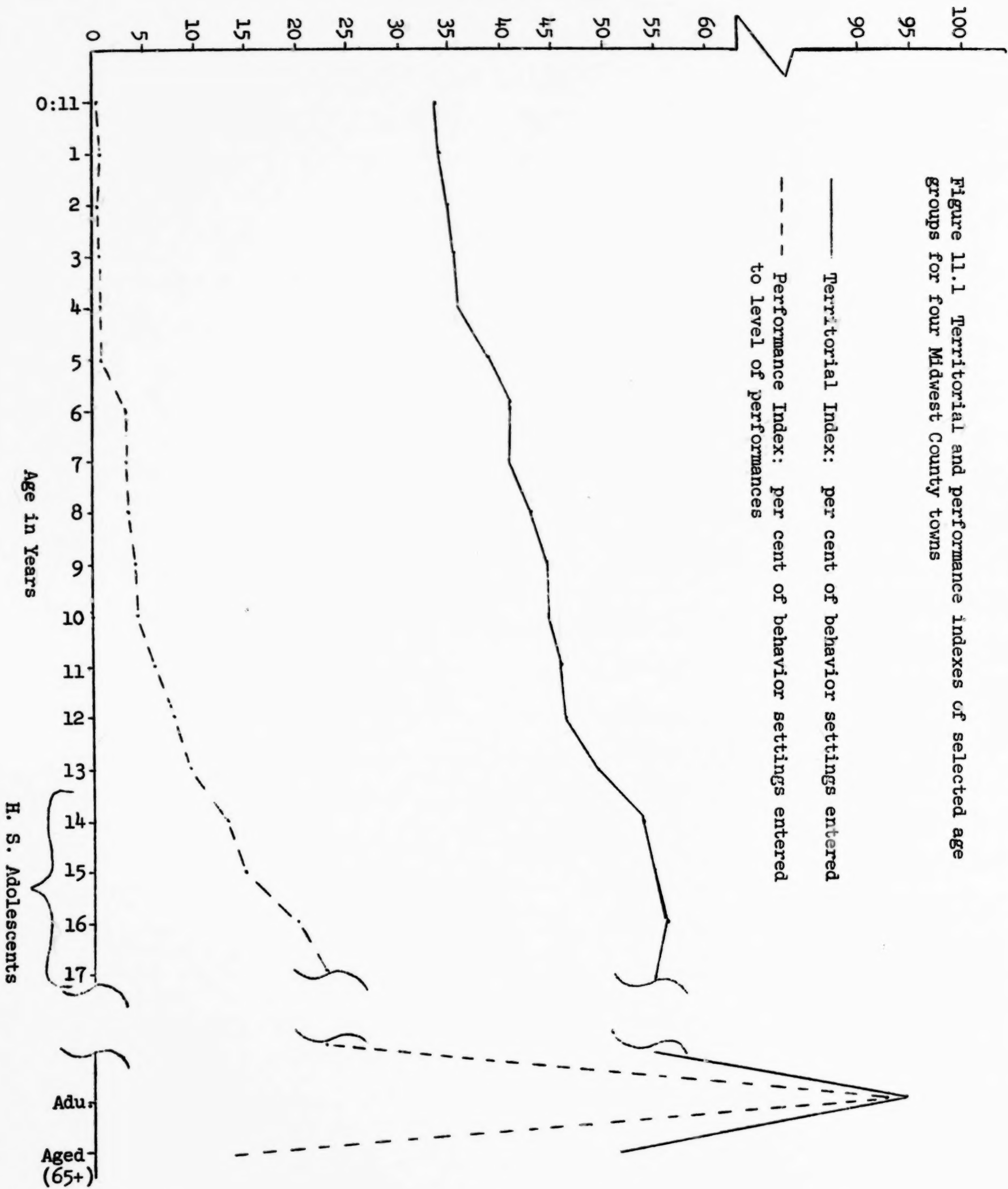
The data on territorial range are reported for various ages in Figure 11.1 in which territorial ranges are expressed as per cents of all the behavior settings of the towns, i.e., as territorial indexes. It will be noted that high school adolescents, age 14 through 17, entered just over 50 per cent of the towns' behavior settings at each age, and that this is the end of a gradual increase in territorial index which began in infancy at 35 per cent. Figure 11.1 shows that adults were present in practically every behavior setting. It should be noted, however, that the points which represent adults (and aged persons, too) are not comparable to those which represent children and adolescents. There were many more adults than children at each of the designated ages.

The performance range of an age group refers to the number of a town's behavior settings in which one or more members of the age group were performers, i.e., carried out actions essential to the immediate functioning of the setting (as chairmen, clerks, teachers, officers, proprietors, soloists, etc.). Performers enter behavior settings at participation levels 3 and 4 as described in Chapter 6, page 93. Chi square tests revealed that the towns did not differ in the performance ranges of different age groups.

The combined data for the four towns are given in Figure 11.1 in terms of performance indexes, i.e., per cent of all the behavior settings in the four towns.

# Territorial and Performance Indexes

Figure 11.1 Territorial and performance indexes of selected age groups for four Midwest County towns





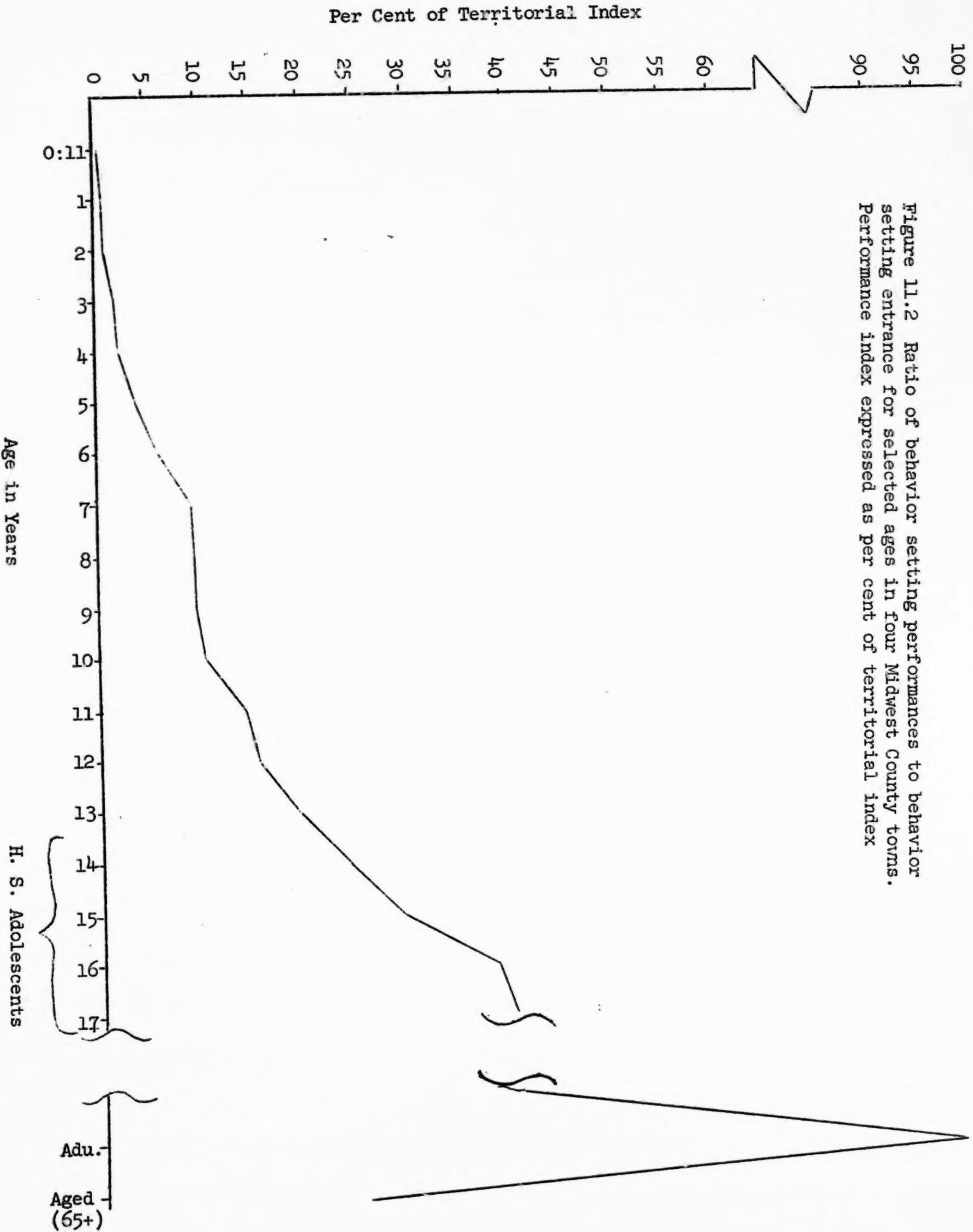
The data show that adolescents were performers in 11 per cent of the towns' behavior settings at 14 years of age and in 22 per cent at 17 years of age. The high school years were a period of rapid expansion into responsible participation: the increase in the performance index during these four years was as great as in the preceding 14 years. The performance index was much smaller than the territorial index at all childhood and adolescent ages, but the performance index increased with age at a more rapid rate than territorial index. This is shown in Figure 11.2 in which performance indexes are represented as per cents of territorial index at all ages. The rapid acceleration in the degree to which adolescents became performers in the settings they entered is very evident. Adults were performers in almost all behavior settings. Again, the points representing adults and aged persons are not comparable with those representing children (see page 203).

In summary, high school adolescents at each consecutive age were inhabitants of about half the behavior settings of the Midwest County towns, and this did not increase during the four years from 14 through 17 years. On the other hand, the settings in which adolescents were responsible participants, i.e., performers, increased at a rate of 2.7 per cent a year during this period to include about one-fifth of the settings at 18 years; during the previous 15 years the rate of increase was 0.8 per cent a year. Adolescents ranged over about half of the town in which they lived, and by the age of 17 they performed in one-fifth of the town's settings. Nevertheless, it is clear that adults dominated the scene in the Midwest County towns; some adults were performers in almost all behavior settings.

#### The Primary Inhabitants of Behavior Settings

There were many types and classes of behavior settings within the territorial range of adolescents. Two important bases for classifying behavior settings are (a) the ages of the primary inhabitants and (b) the ages of the performers. The primary inhabitants of a setting are those inhabitants for whom a behavior setting is intended. Some settings are for males (Rotary Club Meeting), others are for females

Figure 11.2 Ratio of behavior setting performances to behavior setting entrance for selected ages in four Midwest County towns. Performance index expressed as per cent of territorial index



(Beauty Shop); some behavior settings are for children (School Playground) and some are for adults (Bridge Club Meeting). The primary inhabitants of a setting are often not the only inhabitants present, and sometimes they do not constitute a majority of the inhabitants. However, the primary population of a behavior setting influences strongly the physical-temporal arrangements of a setting and its standing behavior pattern. The performers, as has been stated, are those who operate a setting.

Six important classes of behavior settings, as defined by these two criteria, are listed in the tabulation below. The settings are listed in order of their primary inhabitants: the list ranges from those that were intended for the capacities and needs of children (class 1), through those that were adapted to the abilities and wants of high school adolescents (classes 2 and 3), through settings whose primary inhabitants were not restricted as to age (classes 4 and 5), to behavior settings that were harmonious with the skills and motives of adults (class 6). Pari passu, in this list, the performers of the settings change from adults alone (classes 1 and 2), to adults and adolescents (classes 3 and 4), to adults alone (classes 5 and 6).

| Maturity<br>BS Class | Primary Inhabitants                  | Maximal Penetration by |            | Example                                   |
|----------------------|--------------------------------------|------------------------|------------|-------------------------------------------|
|                      |                                      | Adolescents            | Adults     |                                           |
| 1                    | Children (under 14<br>years)         | Not present            | Performers | 1st Grade<br>Music                        |
| 2                    | Adolescents (14<br>through 17 years) | Members                | Performers | High School<br>Science Classes            |
| 3                    | Adolescents (14<br>through 17 years) | Performers             | Performers | High School<br>District Music<br>Festival |
| 4                    | All ages                             | Performers             | Performers | Clifford's<br>Drug Store                  |
| 5                    | All ages                             | Members                | Performers | Beauty Shop                               |
| 6                    | Adults only                          | Not present            | Performers | Presbyterian<br>Session Meeting           |

It will be noted that the classes in this list fall into a rough "maturity order" from behavior settings that are operated by adults for children (class 1), through those that are operated by adults for adolescents (class 2), through settings that are operated by adults and adolescents for adolescents (class 3), through those that are operated by adults and adolescents for all ages (class 4), through behavior settings that are operated by adults for all ages (class 5), to settings that are operated by adults for adults (class 6).

The number of behavior settings in each town, and in all the towns, are reported in Table 11.1 for each of these classes of behavior settings. When the classes are placed in order within each town according to the number of settings falling in them, the coefficient of concordance (Kendall, 1948) shows that the order does not differ across the four towns. Consequently, the frequencies have been summed across the towns.

#### Behavior Settings Devoted to the Welfare of Adolescents

The data of Table 11.1 show that the settings in which high school adolescents were the primary inhabitants, and which were, therefore, intended for and

Table 11.1 Number of behavior settings in each class

| BS Class | Primary Inhabitants | Performers  | Number of Settings |            |            |           | Total      |
|----------|---------------------|-------------|--------------------|------------|------------|-----------|------------|
|          |                     |             | Malden             | Midwest    | Vernon     | Walker    |            |
| 1        | Children            | Adults      | 46                 | 80         | 92         | 61        | 279        |
| 2        | Adolescents         | Adults      | 33                 | 52         | 38         | 38        | 161        |
| 3        | Adolescents         | Adu. & Ado. | 44                 | 64         | 75         | 45        | 228        |
| 4        | All ages            | Adu. & Ado. | 72                 | 143        | 126        | 99        | 440        |
| 5        | All ages            | Adults      | 87                 | 128        | 141        | 69        | 425        |
| 6        | Adults              | Adults      | <u>59</u>          | <u>216</u> | <u>139</u> | <u>58</u> | <u>472</u> |
|          |                     |             | 341                | 683        | 611        | 370       | 2005       |



tempered to the capacities and needs of high school adolescents (classes 2 and 3) constituted 389 or 19 per cent of all behavior settings. This can be viewed as a measure of the towns' special concern for the well-being of adolescents. The Midwest County towns devoted about one-fifth of their behavior areas to the welfare of adolescents who constituted one-twelfth of their population. In contrast, adults (including aged persons) who made up over half the population of Midwest County towns were provided with less than one-quarter of the behavior areas for their use, alone, and the children under 14 who constituted one-fourth of the population were provided with about one-seventh of the towns' settings for their primary use.

When privilege is measured in terms of the behavior setting resources devoted to them, the adolescents of the Midwest County towns were, indeed, a privileged class. However, the high school adolescents were by no means only recipients of benefits within the towns' behavior settings; they were responsible performers in more than half of those settings where they were primary inhabitants (classes 2 and 3), and they were performers (classes 3 and 4) in one-third of all the towns' behavior settings.

#### Functional Importance of Adolescents in the Larger Community

We were especially interested in the place of adolescents in those behavior settings that were not especially arranged and operated for them as the primary inhabitants, i.e., in the larger, nonadolescent community (all behavior settings except classes 2 and 3). We turn to this next.

When a person carries out a task that is essential to the functioning of a setting, we have called this a performance. If he carries out such tasks in two different settings (e.g., teaches a Sunday School class and sings a solo at a community celebration) he engages in two performances. The total number of a person's performances can be enumerated, and when this is reported as a

per cent of all the performances occurring in the community, we term it the Pied Piper index. The Pied Piper index is a measure of the community's loss of essential performances if the person in question were to be piped away, i.e., these are the performances which someone else would have to fill if the community were to maintain its level of functioning. The Pied Piper index is discussed in detail by Barker and Wright (1955).

We have computed average Pied Piper indexes within the larger community for all inhabitants and for high school adolescents. These indexes are presented in Table 11.2. They show, for example, that within Malden's larger, nonadolescent community "the average inhabitant" carried out 0.20 per cent of all the performances occurring within these settings, while "the average adolescent" carried out 0.54 per cent of these performances. In other words the

Table 11.2 Average Pied Piper index of all inhabitants and of high school adolescents in the community-at-large

|                        | Malden | Midwest | Vernon | Walker |
|------------------------|--------|---------|--------|--------|
| All inhabitants        | 0.20%  | 0.13%   | 0.09%  | 0.22%  |
| Adolescent inhabitants | 0.54%  | 0.46%   | 0.45%  | 0.79%  |

adolescents of Malden performed 2.2 times as many responsible tasks in the settings of the larger community than did inhabitants in general. The average Pied Piper index of the high school adolescents within the larger community was 2.5 to 5 times as great as that of all inhabitants. Previous work in the town of Midwest (Barker and Wright, 1955) confirms these findings.

These data indicate that, on the average, high school adolescents performed more of the essential tasks within the larger community than the generality of inhabitants. It is obvious that the adolescents of Midwest County towns did not retire to the behavior settings reserved especially for them; and that, in fact, the functional importance of adolescents within the larger community was greater on the average than at other ages.

There was the possibility that while individually active as performers, high school adolescents were so much in the minority that their contribution would not be seriously missed. We obtained data regarding this possibility by identifying those behavior settings in which high school adolescents constituted 20 per cent or more of the performers. It was assumed that the absence of adolescent performers would in these cases interfere with the functioning of the settings, i.e., that adolescents were essential performers. This was true for the following per cents of the settings in the larger community of each town (i.e., of all settings except those in classes 2 and 3):

|         |       |
|---------|-------|
| Malden  | 23.5% |
| Midwest | 18.5% |
| Vernon  | 20.7% |
| Walker  | 27.5% |

These figures can be viewed as measures of the extent to which the four Midwest County communities were dependent for their functioning upon the performances of high school adolescents, or conversely, the degree to which the towns would be crippled for want of performers if the adolescents were removed. The behavior settings created and operated for the particular benefit of high school adolescents were, of course, omitted from these calculations.

#### Behavior Pattern Characteristics of Behavior Settings

The question arises as to the nature of the adolescents' environment within the Midwest County towns. We have approached this question via the different classes of settings. Now, we shall consider the action patterns of behavior settings. We have dealt with the following eight action patterns: Art, Business, Education, Government, Nutrition, Physical Health, Recreation, Religion. An action pattern was rated present in a behavior setting if it was seen by an observer to be a prominent feature of the behavior pattern of the setting. For example, action patterns concerned with Business and Nutrition were rated as prominent features of the behavior patterns of grocery stores, while Recreation,



which sometimes occurs in grocery stores, was not rated as prominent. The data on behavior patterns are presented in this research in terms of the per cent of settings in which the action pattern was judged to be prominent. The theory and methods of dealing with action patterns are reported in Midwest and Its Children (Barker and Wright, 1955).

Differences and similarities in action patterns were studied across towns and across behavior setting classes. The coefficient of concordance indicated that action pattern rankings, based on per cent of prominent action patterns, agreed across towns at a significant level ( $p < .001$ ). Because of this, the data for the towns were combined. Differences across behavior setting classes were statistically significant ( $p < .01$ ) for all action patterns.

The action patterns are presented in Table 11.3 in order of their occurrence as prominent features of all the settings in the four Midwest County towns. Education and Recreation were the most prominent action patterns; they were prominent in two of every five behavior settings. Nutrition was prominent in one out of three settings; Art, Business, and Religion were prominent in slightly over one-quarter of all settings; Physical Health was prominent in one-sixth of the settings; and Government was prominent in one behavior setting in fourteen.

Table 11.3 Action patterns in behavior settings.  
Per cent of all behavior settings (2005) in which each  
action pattern was prominent, and per cent of settings  
in various classes exhibiting each action pattern prominently

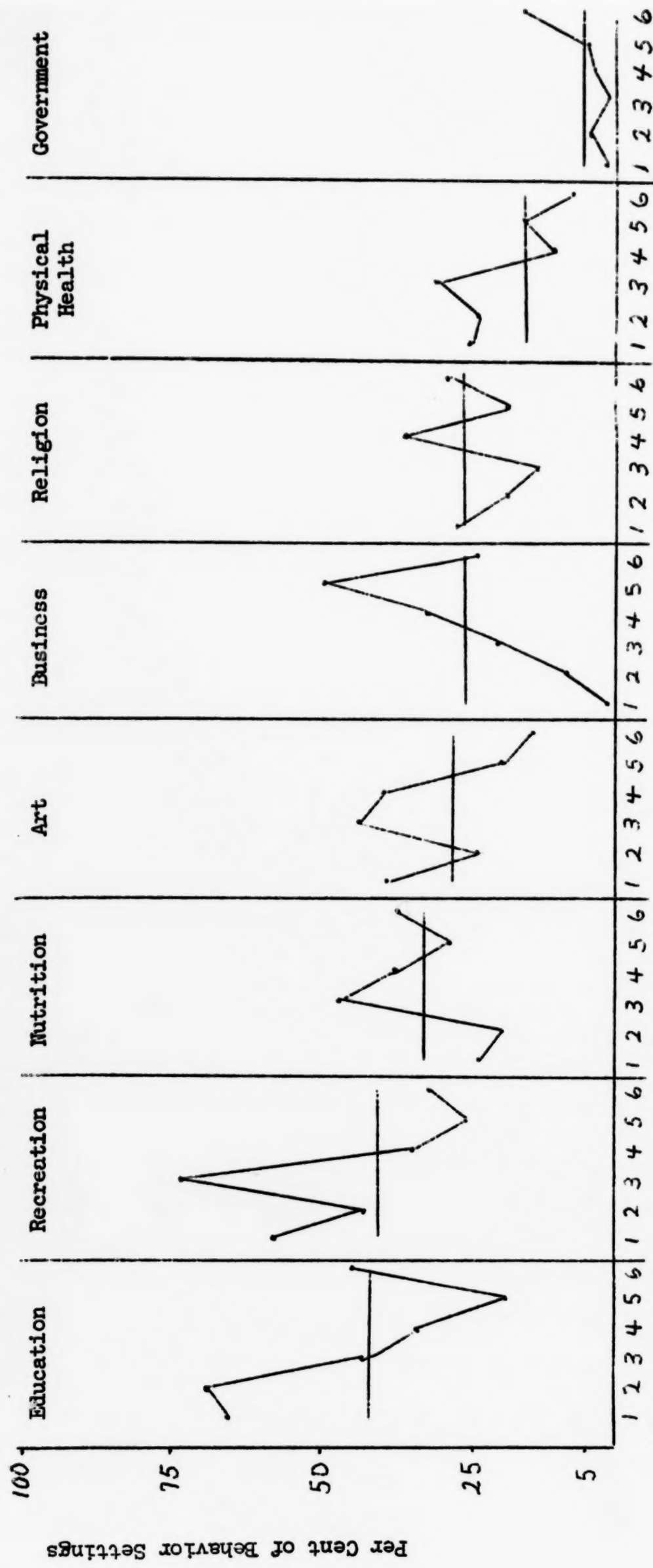
| Class of Setting | Educ. | Rec. | Nut. | Art | Bus. | Relig. | Phys.<br>Hlth. | Gov't |
|------------------|-------|------|------|-----|------|--------|----------------|-------|
| All Settings     | 42    | 40   | 33   | 29  | 26   | 26     | 17             | 7     |
| BS Classes       |       |      |      |     |      |        |                |       |
| 1                | 66    | 58   | 23   | 39  | 2    | 27     | 25             | 2     |
| 2                | 69    | 42   | 20   | 23  | 9    | 20     | 24             | 5     |
| 3                | 43    | 73   | 47   | 44  | 20   | 14     | 32             | 2     |
| 4                | 34    | 35   | 37   | 40  | 32   | 36     | 12             | 4     |
| 5                | 19    | 26   | 28   | 20  | 50   | 18     | 16             | 5     |
| 6                | 45    | 32   | 37   | 15  | 23   | 29     | 8              | 16    |



The data for the classes of behavior settings are presented graphically in Figure 11.3. Here the great variation between behavior setting classes in the prominence of particular action patterns is dramatically displayed. The data show that the action patterns Education, Recreation, Nutrition, Art, and Physical Health reached their peaks of prominence in settings which were designed for the welfare of adolescents (classes 2 or 3). Business, Religion and Government, on the other hand, were of very low prominence in these behavior settings. Within those settings of the larger community which high school adolescents inhabited (classes 4 and 5), Business and Religion reached their peaks of prominence. In other words, the behavior settings within the larger community where adolescents participated extensively compensated to an important degree for action pattern deficiencies in those settings where adolescents were the primary inhabitants.

Behavior settings of class 6, i.e., the settings to which the high school adolescents were to graduate as sole inhabitants in adulthood, gave highest prominence to only one action pattern, namely, Government. No action pattern reached its greatest prominence in settings of class 1, which comprised the settings from which adolescents emerged into adolescence. However, Education, Recreation, and Physical Health were widely prominent in class 1 behavior settings, and Business, Nutrition and Government were low.

It appears from this analysis that the behavior settings arranged particularly for high school adolescents plus those of the larger community which adolescents inhabited, provided adolescents with an environment where all the action patterns we have studied, except Government, were prominent. Action patterns missing from class 2 and 3 settings were provided by class 4 and 5 settings.



Behavior Setting Classes

Figure 11.3 Per cent of all behavior settings (horizontal line) and per cent of settings in each behavior setting class (points) in which action patterns were prominent. Data of four Midwest County towns combined

### Power, Influence, and Richness of Different Classes of Behavior Settings

The power of a behavior setting refers to the number of other settings over which it has authority. The setting High School Principal's Office in Midwest had the power to control the functioning of the setting School Lunch Room (who used it, how the room was arranged, how much was charged, etc.); it, therefore, had power over the School Lunch Room. Data are presented in terms of the per cent of behavior settings which had power over two or more other settings.

The power of different classes of behavior settings is reported in Figure 11.4. It is evident that high school adolescents were not inhabitants of the powerful behavior settings of the towns; only one class of the settings they entered (class 3) had power over other BS's to a greater degree than the generality of settings. The most powerful behavior settings were those in which adults were both the primary inhabitants and the only performers.

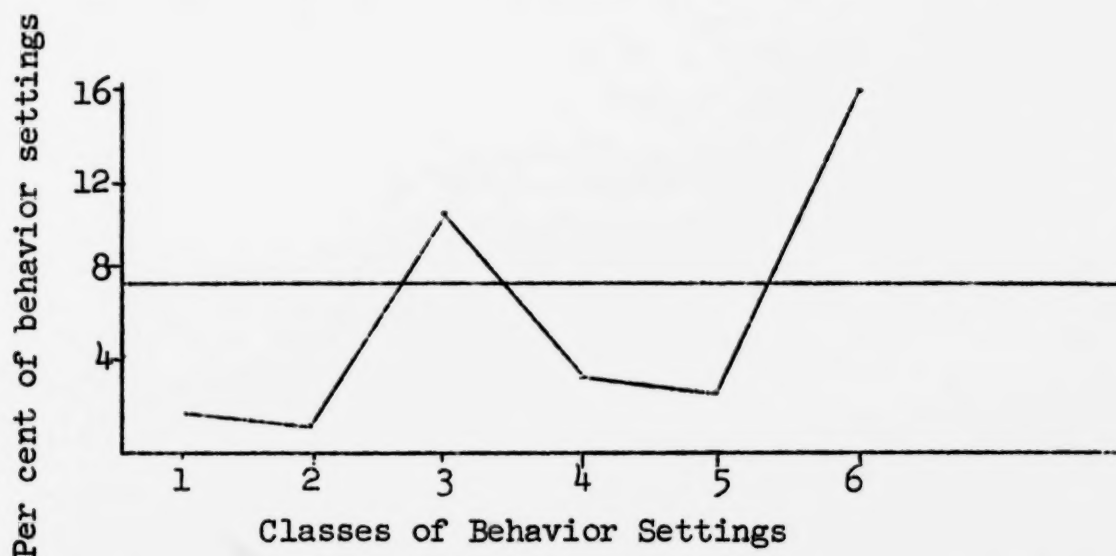
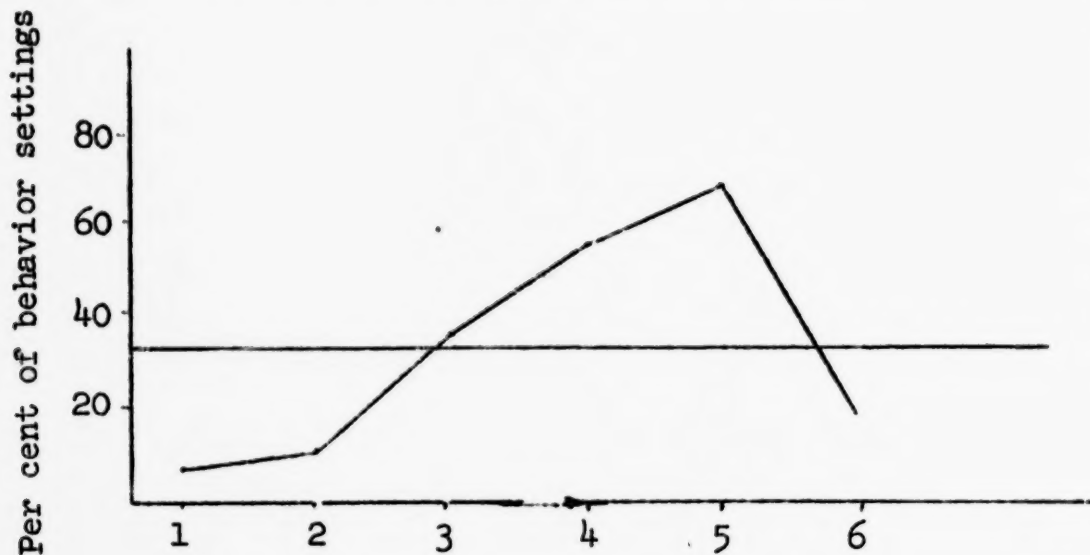


Figure 11.4 Power of different classes of behavior settings. Per cent of all settings (horizontal line) and per cent of settings at different classes (points) with power over two or more behavior settings

The influence of a behavior setting refers to the importance of the setting to individual people; it is measured by the number of persons whose behavior would be directly changed if the setting were to cease functioning. Almost every literate resident of Midwest read the Midwest Weekly and would, therefore, have been directly affected if the setting ceased operation. Data are presented in terms of the per cent of behavior settings with influence upon 92 or more people.

Data concerning the influence of different classes of behavior settings are presented in Figure 11.5. The picture, here, differs radically from that for power. Three of the classes of settings which adolescents inhabited had greater influence than behavior settings in general. High school adolescents were inhabitants of influential settings in Midwest County towns, and they were performers in most of the influential settings. It is interesting to note that among behavior setting classes 4, 5, and 6 the behavior settings that were influential were not powerful, and vice versa.



Classes of Behavior Settings

Figure 11.5 Influence of different classes of behavior settings. Per cent of all settings (horizontal line) and per cent of settings of different classes (points) with influence over 92 or more persons

Richness ratings describe the variety of people and the variety of behavior occurring in a setting. There are three richness ratings: (a) Number of different vocational groups present among the regular inhabitants of the setting. Seven vocational groups were recognized, ranging from professional to unskilled labor. (b) Number of different ages among the people who regularly inhabited the setting. This ranged from one age in the case of School Board Meeting, which only adults attended, to 19 in the case of Basketball Game, which aged persons, adults, and 17 different child and adolescent single-year age groups attended. (c) Number of different action patterns rated prominent in the setting.



Data respecting richness ratings are given in terms of the per cent of behavior settings in the class under consideration which exceeded the median rating of all behavior settings.

Data for the three richness ratings are presented in Figures 11.6, 11.7, and 11.8. According to these data, the special adolescent behavior settings (classes 2 and 3) were somewhat below the general richness standard for vocational groups, ages, and action patterns in the case of class 2 where adolescents were members, and they were somewhat above the general richness standard for class 3, where adolescents were performers. The picture was clearer with respect to settings in the community-at-large which high school adolescents inhabited (classes 4 and 5). These settings were among the richest settings in the towns with respect to the vocational groups and ages of their inhabitants, though action pattern richness was variable. The general indications of these data are that the classes of settings inhabited by the high school adolescents of Midwest County towns were at or above the general community standard with respect to richness. The high school adolescents of Midwest County towns lived in behavior settings that were relatively rich in people and behavior; they were not isolated from the Midwest world.

In summary, we have found that the high school adolescents of small towns in Midwest County participated in behavior settings that were (a) low in power, (b) high in influence, and (c) high in the variety of people and behavior occurring within them.

In an effort to make the findings more concrete, we have listed in Table 11.4 the different kinds of performances in which the 47 high school adolescents of the town of Midwest engaged during the survey year. We have used the definitions of occupations given in The Dictionary of Occupational Titles (1949) as the basis for identifying the "kinds of performances." Eighty-six per cent of all the performance positions filled by the adolescents of Midwest are described in The Dictionary of Occupational Titles as standard occupations in American

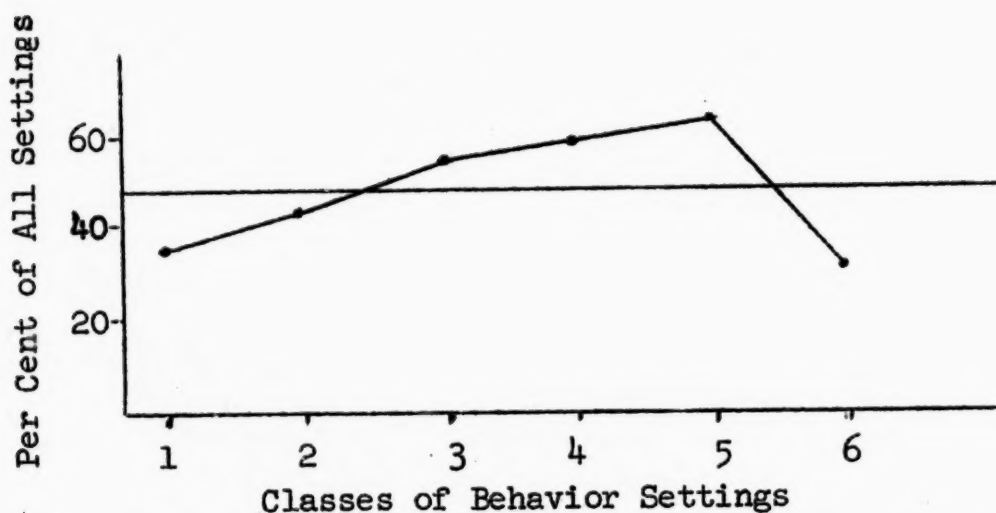


Figure 11.6 Vocational groups present. Per cent of behavior settings within each class (points) which exceeded the median number of vocational groups present in all behavior settings (horizontal line)

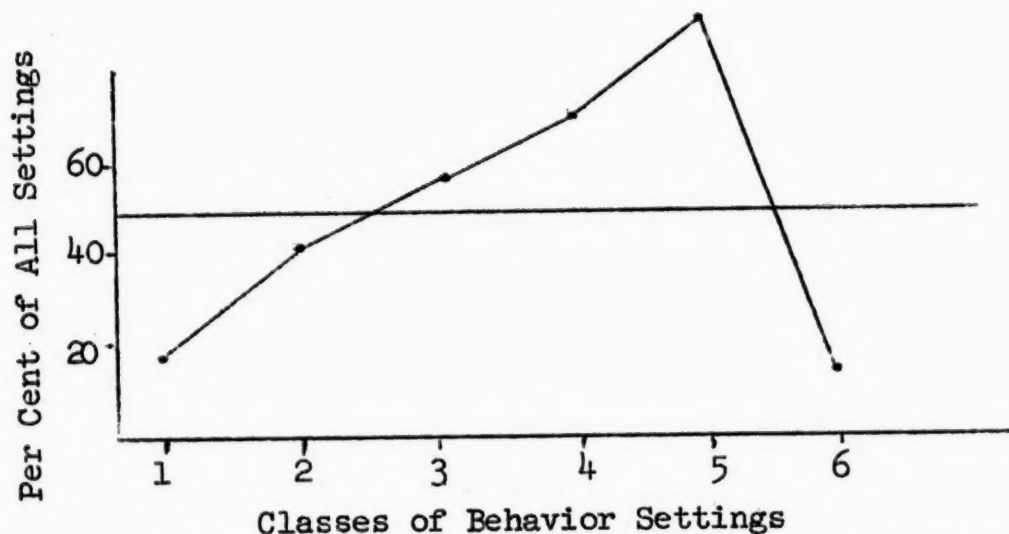


Figure 11.7 Ages present. Per cent of settings within each class (points) which exceeded the median number of ages present in all settings (horizontal line)

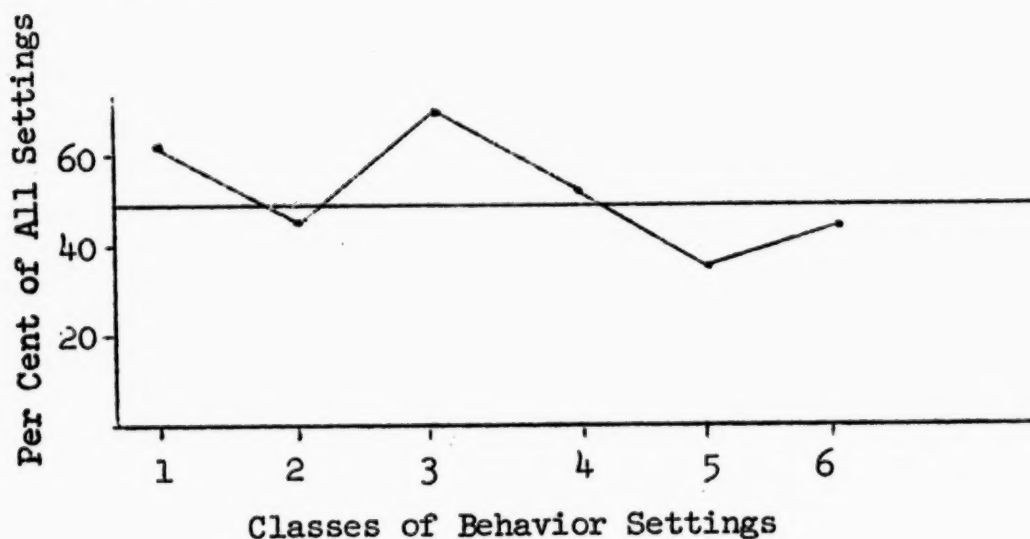


Figure 11.8 Action patterns present. Per cent of settings within each class (points) which exceeded the median number of action patterns present in all settings (horizontal line)

culture. Performances not defined as occupations in The Dictionary are appended at the end of Table 11.4.

In the table each "occupation" (kind of performance) is identified by its Dictionary title and by its Dictionary code number. The number of behavior settings in which each "occupation" occurred is then given separately for those settings where high school adolescents were the primary inhabitants, (class 3) and for those settings within the larger community (class 4). Finally, examples of actual settings within both classes are provided. An example which involved paid employment is indicated by an asterisk beside the setting in which it occurred.

This study has shown that the high school adolescents of the small towns of Midwest County, Kansas, participated in almost two-thirds of the public behavior settings of the towns, and that they were the primary inhabitants of one-fifth of the towns' settings. The latter settings were devoted to the welfare of high school adolescents, and it was in them that the "adolescent culture" occurred. It is obvious, however, that the "adolescent culture" comprised only a part of the high school students' lives, for the behavior settings which accommodated this culture amounted to only 30 per cent of the settings in which they participated. Within the larger community, beyond the bounds of the settings devoted to them, the high school adolescents were functionally important people in influential, but not powerful, behavior settings that were rich in people and rich in behavior. The life of the high school adolescents outside their own culture area supplemented the environment within it by providing exposure to different action patterns.

In these small towns, adolescence was a time of important progress toward full attainment of adult status by means of responsible participation in behavior settings within the larger community.

Table 11.4 Performances engaged in by the high school students of Midwest classified according to the Dictionary of Occupational Titles

| <u>D. O. T. Classification</u>           | <u>Code No.</u> | <u>Setting Class</u> | <u>No. of Settings</u> | <u>Examples of Settings</u>                                        |
|------------------------------------------|-----------------|----------------------|------------------------|--------------------------------------------------------------------|
| Actor and Actress                        | 0-2.11(15)      | 3<br>4               | 2<br>6                 | H. S. Senior Class Play<br>Amateur Program, Old Settlers           |
| Athlete                                  | 0-57.01         | 3<br>4               | 11<br>2                | H. S. Football Games<br>Town Team Baseball Games                   |
| Announcer                                | 0-69.22         | 3<br>4               | 1<br>0                 | H. S. Football Games                                               |
| Automobile Service<br>Station Att.       | 7-60.50         | 3<br>4               | 0<br>3                 | Bethel Service Station *                                           |
| Bus Boy                                  | 2-29.51         | 3<br>4               | 1<br>2                 | Presbyterian Covered Dish Supper<br>Father-Son Banquet             |
| Butcher Helper                           | 9-59.01         | 3<br>4               | 0<br>1                 | Kane's Grocery *                                                   |
| Buyer I<br>(Collector: Used<br>Clothing) | 1-61.60         | 3<br>4               | 0<br>1                 | H. S. Home Ec. Bundle Day Program                                  |
| Cashier II                               | 1-01.53         | 3<br>4               | 0<br>3                 | Old Settlers Reunion--Midway *                                     |
| Character Men<br>(Pantomime)             | 0-02.11         | 3<br>4               | 0<br>1                 | Mother-Daughter Banquet                                            |
| Character Man                            | 0-02.11(15)     | 3<br>4               | 0<br>2                 | School Christmas Vespers                                           |
| Child Monitor                            | 2-07.01         | 3<br>4               | 0<br>2                 | Presbyterian Nursery During Church                                 |
| Chorus Girl<br>(Cheerleader)             | 0-45.21         | 3<br>4               | 0<br>0                 | H. S. Basketball Games                                             |
| Cleaner III                              | 9-85.02         | 3<br>4               | 0<br>3                 | Junior Class Car Wash                                              |
| Clergyman<br>(Worship Leader)            | 0-08.10         | 3<br>4               | 8<br>1                 | Westminster Fellowship Retreat<br>Methodist Easter Sunrise Service |
| Clerk, General Office                    | 1-05.01         | 3<br>4               | 0<br>1                 | Chest Unit X-Ray                                                   |

\* Employment for pay



| <u>D. O. T.<br/>Classification</u>                     | <u>Code No.</u> | <u>Setting<br/>Class</u> | <u>No. of<br/>Settings</u> | <u>Examples of Settings</u>                                                   |
|--------------------------------------------------------|-----------------|--------------------------|----------------------------|-------------------------------------------------------------------------------|
| Clerk-Typist                                           | 1-37.34         | 3<br>4                   | 0<br>1                     | Bank of Midwest *                                                             |
| Compositor I<br>(Typesetter)                           | 4-44.010        | 3<br>4                   | 0<br>1                     | Midwest Weekly *                                                              |
| Concert Singer<br>(Soloist)                            | 0-24.02         | 3<br>4                   | 5<br>19                    | Senior Class Commencement<br>World Day of Prayer Service                      |
| Concession Attendant                                   | 2-40.21         | 3<br>4                   | 0<br>3                     | Boy Scouts Pop Stand at Old<br>Settlers                                       |
| Cook Apprentice                                        | 2-47.01         | 3<br>4                   | 0<br>1                     | County Principals' Dinner with<br>Wives                                       |
| Contribution Solicitors                                | 1-55.40         | 3<br>4                   | 0<br>2                     | Red Cross Fund Drive                                                          |
| Counterman, Cafeteria<br>(Food Servers)                | 2-27.21         | 3<br>4                   | 2<br>2                     | Valentine Formal<br>Grade School Lunch Program *                              |
| County Agricultural<br>Agent<br>(Demonstration Leader) | 0-12.20         | 3<br>4                   | 3<br>0                     | Jolly Juniors 4-H Meeting                                                     |
| Custodian, Athletic<br>Equipment                       | 5-56.92         | 3<br>4                   | 6<br>0                     | H. S. Football Games                                                          |
| Cylinder-Press Man                                     | 4-48.010        | 3<br>4                   | 0<br>1                     | Midwest Weekly *                                                              |
| Dramatic Reader                                        | 0-02.25         | 3<br>4                   | 1<br>4                     | Methodist Watch Night Service<br>Methodist Church School Christmas<br>Program |
| Floor Layer                                            | 5-32.752        | 3<br>4                   | 0<br>1                     | Chase Floor Layer *                                                           |
| Frame Assembler I                                      | 3-39.81         | 3<br>4                   | 0<br>1                     | Wherry Sash and Door Factory *                                                |
| Funeral Attendant                                      | 2-43.91         | 3<br>4                   | 0<br>3                     | Sherwin's Funeral Home *                                                      |

| <u>D. O. T.<br/>Classification</u>       | <u>Code No.</u> | <u>Setting<br/>Class</u> | <u>No. of<br/>Settings</u> | <u>Examples of Settings</u>                                    |
|------------------------------------------|-----------------|--------------------------|----------------------------|----------------------------------------------------------------|
| Gardener                                 | 3-40.01         | 3<br>4                   | 0<br>1                     | Senior Class Jobs for Fund<br>Raising                          |
| Group Worker<br>(Song Leader)            | 0-27.40         | 3<br>4                   | 6<br>6                     | Jolly Juniors 4-H Meeting<br>Baptist Worship Service           |
| Hostess, Restaurant<br>and Coffee Shop   | 2-27.14         | 3<br>4                   | 7<br>3                     | Methodist Y. F. Weiner Roast<br>Presbyterian Watch Night Party |
| Home Demonstration<br>Agent              | 0-12.30         | 3<br>4                   | 2<br>0                     | 4-H Club Sewing Meeting                                        |
| Instrument Players                       | 0-24.12         | 3<br>4                   | 7<br>3                     | Band to K.U. Band Day<br>Halloween Parade                      |
| Janitor                                  | 2-84.10         | 3<br>4                   | 0<br>5                     | U.S. Post Office*                                              |
| Kennelman                                | 3-17.60         | 3<br>4                   | 0<br>1                     | Crawford Kennels *                                             |
| Mechanic Helper                          | 7-81.10         | 3<br>4                   | 0<br>1                     | Beyet Implement *                                              |
| Laborer, Construction                    | 9-32.01         | 3<br>4                   | 0<br>1                     | Nading, Contractor *                                           |
| Lecturer<br>(Speaker or Panel<br>Member) | 0-39.91         | 3<br>4                   | 2<br>3                     | Junior-Senior Banquet<br>County Teachers Institute             |
| Make-up Man<br>(Performer's Helper)      | 2-32.41         | 3<br>4                   | 1<br>0                     | All School Assemblies                                          |
| Make-up Assistant                        | 2-32.42         | 3<br>4                   | 0<br>2                     | H. S. Junior Class Play                                        |
| Manager, Stage                           | 0-02.37         | 3<br>4                   | 0<br>2                     | H. S. Senior Class Play                                        |
| Manager, Athletic<br>Team                | 0-57.51         | 3<br>4                   | 4<br>0                     | Coach's Room                                                   |
| Manager, Recreation<br>Establishment     | 0-98.54         | 3<br>4                   | 7<br>0                     | Teen Town Dances                                               |

| <u>D. O. T.<br/>Classification</u> | <u>Code No.</u> | <u>Setting<br/>Class</u> | <u>No. of<br/>Settings</u> | <u>Examples of Settings</u>              |
|------------------------------------|-----------------|--------------------------|----------------------------|------------------------------------------|
| Manufacturing                      |                 |                          |                            |                                          |
| Assembly Helper                    | 8-94.41         | 3                        | 0                          |                                          |
| (Favor Makers)                     |                 | 4                        | 1                          | Father-Son Banquet                       |
| Master of Ceremonies               | 0-62.51         | 3                        | 2                          | Junior-Senior Banquet                    |
|                                    |                 | 4                        | 5                          | Home Economics Fashion Show              |
| Mechanic and Repair-               |                 |                          |                            |                                          |
| man, Radio                         | 5-63.445        | 3                        | 0                          |                                          |
|                                    |                 | 4                        | 1                          | Midwest TV and Radio Repair *            |
| Model                              | 2-43.41         | 3                        | 1                          | County 4-H Style Revue                   |
|                                    |                 | 4                        | 1                          | Home Economics Fashion Show              |
| Musical Entertainer                | 0-24.07         | 3                        | 3                          | School Assemblies                        |
|                                    |                 | 4                        | 8                          | School Christmas Vespers                 |
| Musician, Instrumental             |                 |                          |                            |                                          |
|                                    | 0-24.12         | 3                        | 3                          | Presbyterian W.F. Regular Summer Meeting |
|                                    |                 | 4                        | 11                         | Baptist Worship Service                  |
| Musical Occupation,                |                 |                          |                            |                                          |
| Miscellaneous                      | 0-24.9          | 3                        | 2                          | H. S. Football Games                     |
| (Drum Major)                       |                 | 4                        | 0                          |                                          |
| Newspaper Carrier                  | 1-58.10         | 3                        | 0                          |                                          |
|                                    |                 | 4                        | 2                          | Capital City Paper Route *               |
| Office Girl                        | 1-23.02         | 3                        | 0                          |                                          |
|                                    |                 | 4                        | 1                          | H. S. Principal's Office                 |
| Parade Attendant                   | 2-40.93         | 3                        | 0                          |                                          |
|                                    |                 | 4                        | 2                          | Halloween Parade                         |
| Painter                            | 5-27.010        | 3                        | 0                          |                                          |
|                                    |                 | 4                        | 1                          | Presbyterian Work Days                   |
| Piano Accompanist                  | 0-24.12         | 3                        | 3                          | Junior-Senior Banquet                    |
|                                    |                 | 4                        | 16                         | Eastern Star Men's Night                 |
| Prompter                           | 1-49.04         | 3                        | 2                          | Senior Class Play Practice               |
|                                    |                 | 4                        | 1                          | Senior Class Play                        |
| Repairman and Mechanic             |                 |                          |                            |                                          |
| Helper, Tractor                    | 7-81.040        | 3                        | 0                          |                                          |
|                                    |                 | 4                        | 2                          | Midwest Hardware & Implement Co. *       |
| Routeman Helper                    | 9-35.10         | 3                        | 0                          |                                          |
|                                    |                 | 4                        | 1                          | Pearson Dairy Barn *                     |

| <u>D. O. T.<br/>Classification</u>        | <u>Code No.</u> | <u>Setting<br/>Class</u> | <u>No. of<br/>Settings</u> | <u>Examples of Settings</u>                      |
|-------------------------------------------|-----------------|--------------------------|----------------------------|--------------------------------------------------|
| Sales Clerk                               | 1-70.10         | 3                        | 0                          |                                                  |
|                                           |                 | 4                        | 11                         | Variety Store *                                  |
| Salesperson                               | 1-75.71         | 3                        | 0                          |                                                  |
|                                           |                 | 4                        | 2                          | Cabell Department Store*                         |
| Secretary                                 | 1-33.01         | 3                        | 0                          |                                                  |
|                                           |                 | 4                        | 1                          | County Supt. of Schools Office *                 |
| Scientific Helper<br>(Research Assistant) | 0-50.23         | 3                        | 0                          |                                                  |
|                                           |                 | 4                        | 1                          | Child Study Project Office *                     |
| Soda Dispenser                            | 2-27.61         | 3                        | 0                          |                                                  |
|                                           |                 | 4                        | 1                          | Denton Drug Store *                              |
| Solicitor                                 | 1-55.40         | 3                        | 0                          |                                                  |
|                                           |                 | 4                        | 1                          | School Magazine Sale                             |
| Story Teller                              | 0-69.92         | 3                        | 0                          |                                                  |
|                                           |                 | 4                        | 1                          | Story Hours, Library                             |
| Tap Dancer                                | 0-45.11         | 3                        | 0                          |                                                  |
|                                           |                 | 4                        | 2                          | Amateur Show, Old Settlers                       |
| Teacher, First Aid<br>(Demonstrator)      | 0-32.91         | 3                        | 0                          |                                                  |
|                                           |                 | 4                        | 1                          | Boosters Club Regular Meeting                    |
| Teacher, High School<br>(Bible)           | 0-31.01         | 3                        | 3                          | Methodist H. S. Class                            |
|                                           |                 | 4                        | 0                          |                                                  |
| Teacher, Kinder-<br>garten                | 0-30.02         | 3                        | 0                          |                                                  |
|                                           |                 | 4                        | 1                          | Methodist Kindergarten Vacation<br>Church School |
| Taxi Driver                               | 7-36.040        | 3                        | 1                          | Methodist Y.F. to Emporia                        |
|                                           |                 | 4                        | 0                          |                                                  |
| Ticket Taker                              | 2-40.91         | 3                        | 0                          |                                                  |
|                                           |                 | 4                        | 1                          | Teachers' Conference                             |
| Umpire, Referee                           | 0-57.61         | 3                        | 1                          | Pony and Little League Teams                     |
|                                           |                 | 4                        | 1                          | Grade School Basketball Games                    |
| Usher                                     | 2-48.10         | 3                        | 0                          |                                                  |
|                                           |                 | 4                        | 3                          | H. S. Senior Class Play                          |
| Waitress                                  | 2-27.12         | 3                        | 0                          |                                                  |
|                                           |                 | 4                        | 6                          | Hotel *                                          |



| <u>D. O. T.<br/>Classification</u> | <u>Code No.</u> | <u>Setting<br/>Class</u> | <u>No. of<br/>Settings</u> | <u>Examples of Settings</u>          |
|------------------------------------|-----------------|--------------------------|----------------------------|--------------------------------------|
| Waiter, Informal                   | 2-27.11         | 3                        | 1                          | Junior-Senior Banquet<br>Gwynn Cafe* |
|                                    |                 | 4                        | 2                          |                                      |
| Window Cleaner                     | 2-82.30         | 3                        | 0                          | Senior Jobs for Fund Raising         |
|                                    |                 | 4                        | 1                          |                                      |

Performances not defined as occupations in The Dictionary of Occupational Titles:

|                                   |                               |
|-----------------------------------|-------------------------------|
| Attendant                         | Methodist Wedding             |
| Award Recipients                  | H. S. Awards Assembly         |
| Bride                             | Methodist Wedding             |
| Bride                             | Charivari                     |
| Club or School Officer            | H. S. Student Council Meeting |
| Initiation Directors and Planners | H. S. Freshman Initiation     |
| King, Queen, and Attendants       | Valentine Formal              |
| Offenders                         | City Court                    |
| Witness                           | District Court Session        |

## CHAPTER 12

### School Size and Student Behavior and Experience: An Overview

Roger G. Barker

To an outside observer, a school with many students is impressive: its imposing physical dimensions, its seemingly endless halls and numberless rooms, its hundreds of microscopes, its vast auditorium and great audiences, its sweeping tides of students all carry the message of power, movement, vitality, purpose, achievement, certainty. In contrast, a small school with its small building, its three microscopes, its dual-purpose gymnasium-auditorium half-filled with students who assemble and depart, not in tides, but in a tangle of separate channels is not impressive. The members of the field-work team were repeatedly impressed that the directly experienced differences between large and small schools were, in these respects, so compelling, like the differences between a mighty river and a meandering brook.

But to an inside participant the view is different. When the field workers were able to observe and participate in the functioning behavior settings of schools, they saw that the small schools were, in some respects, more powerful and dynamic than the large schools, and the studies reported here amply confirm this impression.

The data show, in fact, that large schools which have 25 times as many students as small schools have only five times as many behavior settings and 1.5 times as many varieties of settings. A small school is not so small in terms of the number and variety of its parts; like a small engine or small organism, it possesses the essential parts of a large entity, but has fewer replications and differentiations of some of the parts (Chapter 4).

Our investigations of the behavior and experiences of students were guided by the hypothesis that the essential equivalence of small and large high schools

with respect to kinds of parts, together with their difference in number of students per part provides a crucially different environment for students. A prototype of this difference is the Junior Class play of a small school where each of the members of the class is essential to the play's successful presentation versus the Junior Class of a large school where at most only 15 per cent of the members of the Junior class have more than a spectator's involvement in the play. According to the theory that guided the research, the behavior settings Junior Class play, English class, ball game, student council meeting are not passive stages upon which behavior may occur, but they are extraindividual entities with power over the participants and potential participants. Detailed predictions regarding the expected behavior and experiences of small and large school students were made before the investigations were begun (Chapters 1 and 2).

Voluntary school behavior settings occupied a large place in the investigations because attendance and participation can be easily observed, and they are crucial indicators of motivation and involvement. In the case of school classes, on the other hand, where attendance and participation are required, methods of assessing motivation and involvement are very difficult. It is for this technical reason that many of the investigations were limited to nonclass (extracurricular) settings.

Investigations were made in high schools varying in enrollment from 35 to 2287 students; the most crucial studies compared high school Juniors in four schools of 83 to 151 students with those in a high school of 2287 students. The schools were located in Eastern Kansas within a homogeneous economic, cultural and political region; all schools met the standards of the same state authority (Chapter 4).

### Extent of Participation in School Activities

The proportion of students who participated in district dramatic, journalistic, student government, and music festivals and competitions reached a peak in high schools with enrollments between 61 and 150. The proportion of participants was 3 to 20 times as great in the small schools as in the largest school. The average number of extracurricular activities and kinds of activities in which students engaged during their 4-year high school careers was twice as great in the small as in the large schools (Chapter 5).

The large high school provided its Junior students with a larger number and more varieties of nonclass behavior settings than the small schools (Chapters 4 and 6). In spite of this, the small school students participated in the same number and in more varieties of the available settings, on the average, than the students of the large school. Furthermore, a much larger proportion of the small school students held central positions of importance and responsibility in the behavior settings they entered, and they occupied these central positions in more varieties of settings than the students of the large school. The number of settings in which students participated varied more among students of the large than of the small schools (Chapters 6 and 9).

### Experiences Reported by Students

Our hypothesis predicted that small and large school Juniors would report different kinds of satisfactions from their experiences in the behavior settings they inhabited. This prediction was confirmed (Chapters 7 and 9). Specifically, Juniors from the small schools reported more satisfactions relating to the development of competence, to being challenged, to engaging in important actions, to being involved in group activities and to achieving moral and cultural values; while large school Juniors reported more satisfactions dealing with vicarious enjoyment, with large entity affiliation, with learning about their



school's persons and affairs, and with gaining "points" via participation. It was further predicted that these school differences would be causally related to differences in occupancy of important and responsible positions in school settings. This prediction was verified: the satisfactions reported were significantly influenced by the positions the student respondents occupied within settings, and most of the differences between large and small schools in this regard were eliminated when differences in setting position were held constant. The burden of the evidence supports the conclusions that large and small school Juniors experienced different satisfactions and that these differences were due to differences in the number of students who occupied important, responsible positions (Chapter 7).

Students of small schools reported experiencing more attractions and more pressures toward participation in school nonclass behavior settings than students of large schools, and their responses reflected more involvement and more feelings of responsibility. Furthermore, the small schools did not produce such great individual differences in experienced attractions and pressures as did the large school; the small schools contained fewer "outsiders." The findings indicate that the small school students lived under greater day-by-day attraction, obligation, and external pressure to take active part in the various behavior settings of their schools (Chapters 8 and 9).

#### Community Activities

Part-time and summer employment in business and professional behavior settings, and responsible participation in church and out-of-school social organizations are widely believed to have educational values. These community activities were more frequent for the small school-small town adolescents than for the large school-city adolescents. In these respects, the differences were clearer for the boys than for the girls. In general, the schools and communities

were harmonious: the small communities, like the small schools, provided positions of functional importance for adolescents more frequently, and the cities, like the large schools, provided such positions less frequently. The data provide no evidence that the urban environments of the large schools compensated by means of their greater resources and facilities for the relatively meager functional importance of students within their large schools (Chapter 10). In the two instances studied where students were removed from small communities and transported to a central, district school, there was some evidence that participation in both community settings and voluntary school settings was lower than in the case of students attending small schools in small communities (Chapter 9). The high school adolescents of the small communities made functionally important contributions to their towns in behavior settings beyond the borders of the schools; and these settings, in turn, supplemented the school settings (Chapter 11).

#### Classroom Activities

For the technical reasons that have been mentioned, most of the findings of the research refer to nonclass (extracurricular) activities. The question arises if the findings hold, as well, for classroom activities. This is a very important question, and we shall summarize the limited data that bear upon it. But the fact that classroom activities are important does not detract from the educational significance of the findings with respect to nonclass activities. In high schools of all sizes, classroom behavior settings comprise about 20 per cent of all school settings; this is true, also, of two English schools we have studied. Evidently the educational enterprise as it is organized in many schools today involves substantial arrangements for nonacademic activities. Whether or not these activities are presumed to have positive educational value, schools provide behavior settings for them, and the settings demand the time and

attention of students; they therefore contribute in one way or another to the schools' influence upon students, and it is important to know what behavior and experiences they are eliciting.

The study of school structure showed (a) that formal educational behavior settings constituted about the same proportion of the settings of schools of all sizes; (b) that there were fewer varieties of formal educational behavior settings in the small schools; and (c) that within the variety concerned with academic subjects the number of different subject-matter classes (cytoseettings) was smaller in the small schools (Chapter 4). In spite of the greater numbers and varieties of educational behavior settings in the large schools, the available evidence indicates that, as was true with the nonclass settings, the large school students participated in fewer classes and varieties of classes than the small school students (Appendix 12.1). The problem of specialization was investigated in the case of the single subject matter music, with the finding that musical education and experience were more widely distributed among the small school than among the large school students, but there were more musical specialists among the large school students (Appendix 12.2).

The studies presented in this report carry two very general messages. The first message is that a school constitutes the environment of its students, and can be studied as environment; the second message is that school size (enrollment) is an important attribute of school environment. The first message is concerned with methods and concepts for investigating the environment of molar actions, and we hope the concepts and methods we have presented will be effective in connection with many problems in addition to the particular ones we have investigated. The second message relates to a special cluster of social issues, namely the consequences of the greater school enrollments which are accompanying the increased population pressure.



Although there has long been evidence from industrial psychology that the larger and more bureaucratically efficient the organization the greater the degradation of the individual, this knowledge has had little influence upon schools, and the widespread concern for the organization man has not been accompanied by a similar concern for the organization child. On the contrary the enlargement of schools has often been accepted not as an unfortunate necessity, but as a welcome educational improvement. This evaluation is usually based upon the assumption of a direct coupling between the properties of schools and the experiences and behavior of its children, e.g., the assumption that a rich curriculum means rich experiences for students, or that a multiform program of activities means strong individual involvement. This simplex view so common in education has been long passed in the physical and biological sciences. No one would seriously argue that because one bridge is stronger than another, the individual beams of which it is constructed must also be stronger.

These investigations show that one attribute of schools, enrollment, is causally related to the behavior and experiences of the students who compose the school, but that the connections are not direct and simple; the couplings are indirect, complex, sometimes paradoxical, but nonetheless strongly coercive. One faulty link in the argument from schools to students is the confusion of facilities with experiences. Good facilities provide good experiences only if they are used. The educational process is a subtle and delicate one about which we know little; but it surely thrives upon participation, enthusiasm and responsibility. Without participation, education cannot occur however excellent the arrangements may be. All of our findings reveal a negative relation between school size and individual student participation. To the degree that this is true it means that when better facilities are purchased at the expense of larger size they are discounted by lower participation by students. Good facilities, varied



course offerings, and a diversity of activities doubtless have educational values. However, our findings show that instructional variety (academic scope) enlarges very slowly with growth in size: schools differing in enrollment by 100 per cent, had only a 17 per cent median difference in instructional variety. Increasing school size would appear to be a relatively ineffective means of achieving richness and variety.

A basic problem for the immediate future is to investigate the degree to which the relations that have been described between school size, school settings, and student participation are inevitable. Not only the present research, but all other research known to us, indicates that the negative relationship between institutional size and individual participation is deeply based and difficult, if not impossible, to avoid (Chapter 3). It may be easier to bring specialized and varied behavior settings to small schools than to raise the level of individual participation in the large schools. Furthermore the current method of broadening educational offerings by moving hundreds of bodies to one central spot may be both unnecessary and old-fashioned. Already a technical revolution with respect to teaching devices and educational facilities is upon us. Self-teaching machines, taped school courses, T.V. classes, wired T.V. linking separate schools, new ideas about teaching personnel (e.g., school aids), new conceptions of inter-school cooperation (e.g., transporting teachers and equipment rather than students), new conceptions of the contributions of the community to educational objectives, and new materials and standards for school construction are freeing schools from past moulds.

Schools are specialized environments, established and manipulated in order to produce certain educational opportunities and effects. We are in need of more investigations, employing new concepts and methods, in order to determine the nature and consequences of these environments.

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## APPENDIXES

Appendix 4.1  
Behavior Setting Survey  
Midwest High School  
School Year 1959-60

Variety Name

Behavior Setting Name

1. Athletic Contests, Indoors
  - 1.1 Regional Basketball Tournament
  - 1.2 District Basketball Tournament
  - 1.3 County Basketball Tournament
  - 1.4 Basketball Games, Boys A and B Teams and Girls
  - 1.5 Basketball Games, Boys A and B Teams and Girls at other school
  - 1.6 Basketball Practice, Boys
  - 1.7 Basketball Practice, Girls
  - 1.8 Gymnasium for Noon Freetime
2. Athletic Contests, Outdoors
  - 2.1 County Track Meet at other school
  - 2.2 Track Practice
  - 2.3 Football Game
  - 2.4 Football Game at other school
  - 2.5 Football Practice
  - 2.6 Baseball Game at other school
  - 2.7 Baseball Practice
8. Book Exchange and Rentals
  - 8.1 Parent-Teacher Book Exchange
15. Dances
  - 15.1 Dance Following Football Game
  - 15.2 Dance Honoring Basketball Boys
  - 15.3 Homecoming Dance
  - 15.4 Valentine Formal
17. Dinners and Banquets
  - 17.1 Last Day of School Dinner
  - 17.2 Junior-Senior Banquet and Dance
20. Educational Groups, Academic
  - 20.1 English I, II, III, IV Classes
  - 20.2 Social Science and Latin Classes
  - 20.3 Algebra, Algebra II, and Geometry Classes
  - 20.4 Bookkeeping, Shorthand, and Typing Classes
  - 20.5 Science Classes
  - 20.6 General Mathematics Class
  - 20.7 Health Class
  - 20.8 Miss A's Make-up Day
21. Educational Groups, Driver Education
  - 21.1 Driver Education Class
22. Educational Groups, Home Economics
  - 22.1 Home Economics Classes

- 23. Educational Groups, Music
  - 23.1 Band Marching Practice
  - 23.2 Band Practice
  - 23.3 Junior Band Practice
  - 23.4 Voice Groups
- 24. Educational Groups, Physical Education
  - 24.1 Freshman Physical Education Class
  - 24.2 Cheerleader Practice
- 25. Educational Groups, Shop and Agriculture
  - 25.1 Boys Shop Classes
  - 25.2 Boys Mechanical Drawing Class
- 29. Fire and Tornado Drills
  - 29.1 Fire Drill
- 35. Food Sales
  - 35.1 Senior Class Food Sale
  - 35.2 Sophomore Class Food Sale
- 36. Fund and Membership Drives
  - 36.1 Students Magazine Subscription Sale
  - 36.2 Home Economics Bundle Day Program
  - 36.3 Junior and Senior Fire Extinguisher Sale
  - 36.4 Senior Class Candy Sale
- 39. Government and School Offices
  - 39.1 Principal's Office
  - 39.2 Ditto Room
- 41. Hallways and Coatrooms
  - 41.1 Halls
- 48. Initiations
  - 48.1 Senior Class Freshman Initiation
- 52. Libraries
  - 52.1 Library and Study Hall
- 54. Meetings, Executive
  - 54.1 Student Council Meeting
- 55. Meetings, Organization Business
  - 55.1 Senior Class Meeting
  - 55.2 Junior Class Meeting
  - 55.3 Sophomore Class Meeting
  - 55.4 Freshman Class Meeting
  - 55.5 Girls Pep Club Meeting
  - 55.6 Home Economics Club Meeting
- 56. Meetings, Social Cultural
  - 56.1 Drama Club Meeting
- 64. Open Spaces
  - 64.1 High School Playground
  - 64.2 Football Field

- 65. Outings
  - 65.1 Band to Kansas University Band Day
  - 65.2 Home Economics Girls to Kansas State
  - 65.3 Senior Class Trip to Capital City for Pictures
  - 65.4 Senior Class Trip to Chicago
  - 65.5 Junior Constitution Trip to Senate and Legislature
  - 65.6 Sophomore Class to Movies
  - 65.7 Freshman Class Skating Party
  - 65.8 Drama Club Theater Party
  - 65.9 Students Trip to See "Julius Caesar"
- 68. Parties
  - 68.1 All School Party
  - 62.2 Senior Class Scavenger Hunt
- 70. Plays, Concerts, and Programs
  - 70.1 Music Festival at Pattonsburg
  - 70.2 County Festival Play at Nelson
  - 70.3 All School Assembly
  - 70.4 Big School Assembly
  - 70.5 Opening Assembly
  - 70.6 Assembly
  - 70.7 Pep Club Assembly
  - 70.8 Christmas Vespers
  - 70.9 Spring Music Concert
  - 70.10 Home Economics Fashion Show and Tea for Mothers
  - 70.11 Drama Club Family Night Show
  - 70.12 Drama Club Variety Show
  - 70.13 Senior Class Play
  - 70.14 Senior Class Play Practice
  - 70.15 Junior Class Play
  - 70.16 Junior Class Play Practice
- 76. Recognition Programs
  - 76.1 Awards Assembly
  - 76.2 Commencement
  - 76.3 Class Night
- 78. Religious Services and Classes
  - 78.1 Baccalaureate
- 80. Restaurants
  - 80.1 Lunch Room and Kitchen
- 81. Restrooms
  - 81.1 Boys' Basement Restroom
  - 81.2 Boys' Basement Locker and Shower Room
  - 81.3 Girls' Basement Restroom
  - 81.4 Girls' Basement Locker and Shower Room
  - 81.5 Home Economics Club Room
- 83. School, Coaches' Rooms
  - 83.1 Coach's Room



- 84. School, Custodians' Rooms
  - 84.1 Utility Room
- 85. School, Special Days
  - 85.1 Enrollment Day
- 95. Volunteer Work and Fund Raising Projects
  - 95.1 Seniors Jobs for Fund Raising
  - 95.2 Senior Car Wash
  - 95.3 Junior Car Wash
  - 95.4 Juniors Decorate for Junior-Senior Prom
  - 95.5 Sophomore Car Wash

Behavior Setting Survey  
Capital City High School  
School Year 1959-60

- 1. Athletic Contests, Indoors
  - 1.1 Basketball Tournament
  - 1.2 Basketball Game, A Team
  - 1.3 Basketball Game, A Team at other school
  - 1.4 Basketball Practice, A Team
  - 1.5 Basketball Game, B Team
  - 1.6 Basketball Game, B Team at other school
  - 1.7 Basketball Practice, B Team
  - 1.8 Basketball Game, Sophomore
  - 1.9 Basketball Game, Sophomore at other school
  - 1.10 Basketball Practice, Sophomore
  - 1.11 Wrestling Match, A Team
  - 1.12 Wrestling Match, A Team at other school
  - 1.13 Wrestling Match, B Team
  - 1.14 Wrestling Match, B Team at other school
  - 1.15 Wrestling Practice
  - 1.16 Basketball, Boys Intramural
  - 1.17 Handball, Boys Intramural
  - 1.18 Bowling, Boys Intramural
  - 1.19 Playday at other school, Girls
  - 1.20 Basketball, Girls Intramural
  - 1.21 Volleyball, Girls Intramural
  - 1.22 Deck Tennis, Girls Intramural
  - 1.23 Badminton, Girls Intramural
  - 1.24 Trampoline Activities, Girls
- 2. Athletic Contests, Outdoors
  - 2.1 Football Game, A Team
  - 2.2 Football Game, A Team at other school
  - 2.3 Football Game, B Team
  - 2.4 Football Game, B Team at other school
  - 2.5 Football Practice, A and B Teams
  - 2.6 Football Game, Sophomore
  - 2.7 Football Game, Sophomore at other school
  - 2.8 Football Practice, Sophomore
  - 2.9 Track Meet

2. Athletic Contests, Outdoors (cont'd)
  - 2.10 Track Meet at other school
  - 2.11 Track Practice
  - 2.12 Cross Country Race
  - 2.13 Cross Country Race at other school
  - 2.14 Cross Country Practice
  - 2.15 Tennis Game
  - 2.16 Tennis Game at other school
  - 2.17 Tennis Practice
  - 2.18 Golf Game and Practice, Boys
  - 2.19 Baseball Game
  - 2.20 Baseball Game at other school
  - 2.21 Baseball Practice
  - 2.22 Touch Football, Boys Intramural
  - 2.23 Golf Game and Practice, Girls
8. Book Exchange and Rentals
  - 8.1 Book Rental and Exchange Room
  - 8.2 Library Club Sale of Paper Backs
12. Classrooms, Freetime and Home Room
  - 12.1 through 12.74. 74 Home Rooms
15. Dances
  - 15.1 Varsity Dance after Game in Cafeteria
  - 15.2 Annual Election Dance
  - 15.3 Queen of Courts Varsity Dance
  - 15.4 Junior-Senior Prom
  - 15.5 Senior Dance Following Commencement
  - 15.6 Sophomore Party
  - 15.7 Pep Club Roundup
  - 15.8 All School Dance
17. Dinners and Banquets
  - 17.1 Employer-Employee Banquet
  - 17.2 Future Homemakers of America St. Patricks Tea with Mothers
  - 17.3 Thespian Supper Party and Initiation
  - 17.4 Open House Dinner
  - 17.5 Quill and Scroll Potluck Supper
  - 17.6 Future Nurses Pinning Banquet, New Holiday Inn
  - 17.7 Sunflower Debate League Dinner at Shereton High
  - 17.8 All Sports Banquet, City Hotel
  - 17.9 Football Banquet
  - 17.10 C Club Dinner for Coaches and Wives
  - 17.11 Basketball Game Cadets Breakfast
  - 17.12 Future Teachers Club Installation Banquet
18. Doctors' Offices and Clinics
  - 18.1 School Nurse's Office
  - 18.2 Tuberculin Testing Program
  - 18.3 Vision and Hearing Screen Test

- 20. Educational Groups, Academic
  - 20.1 English Classes
  - 20.2 English Classes
  - 20.3 English Classes
  - 20.4 English Classes
  - 20.5 English and Journalism Classes
  - 20.6 English and Reading Classes
  - 20.7 English and Stage Craft Classes
  - 20.8 English Classes
  - 20.9 English Classes
  - 20.10 English Classes
  - 20.11 English Classes
  - 20.12 English Classes
  - 20.13 English and Speech Classes
  - 20.14 English Classes
  - 20.15 English Classes
  - 20.16 English Classes
  - 20.17 Math Classes
  - 20.18 Math Classes
  - 20.19 Math Classes
  - 20.20 Math Classes
  - 20.21 Math Classes
  - 20.22 Math Classes
  - 20.23 Math Classes
  - 20.24 Physics Classes
  - 20.25 Chemistry Classes
  - 20.26 Biology Classes
  - 20.27 Chemistry Classes
  - 20.28 Botany and Biology Classes
  - 20.29 Biology Classes
  - 20.30 Physics Classes
  - 20.31 Biology Classes
  - 20.32 Physiology Classes
  - 20.33 Biology Classes
  - 20.34 General Science Classes
  - 20.35 Social Studies Classes
  - 20.36 Social Studies Classes
  - 20.37 Social Studies Classes
  - 20.38 Social Studies Classes
  - 20.39 Social Studies Classes
  - 20.40 Social Studies Classes
  - 20.41 Social Studies and Public Speaking Classes
  - 20.42 Social Studies Classes and Debate Classes
  - 20.43 Social Studies Classes
  - 20.44 Social Studies Classes
  - 20.45 Social Studies Classes
  - 20.46 Social Studies Classes
  - 20.47 Spanish and Latin Classes and Latin Club
  - 20.48 French Classes
  - 20.49 Spanish Classes
  - 20.50 French and Latin Classes and Latin Club
  - 20.51 Commercial Classes
  - 20.52 Commercial Classes
  - 20.53 Typing Classes and Business Arithmetic

- 20. Educational Groups, Academic (cont'd)
  - 20.54 Typing Classes
  - 20.55 Bookkeeping Classes
  - 20.56 Stenography Classes
  - 20.57 Transcription Classes
  - 20.58 Typing Classes
  - 20.59 Stenography and Bookkeeping Classes
  - 20.60 Commercial Classes
  - 20.61 Bookkeeping and Typing Classes
  - 20.62 Typing Classes
  - 20.63 Office Machine Classes
  - 20.64 Retail Selling Classes
  - 20.65 Study Hall
  - 20.66 Study Hall
  - 20.67 Study Hall
  - 20.68 Senior Testing Period
  - 20.69 Junior Testing Period
  - 20.70 Sophomore Testing Period
- 20A. Education Groups, Art Education
  - 20A.1 General Art and Advanced Ceramics Classes
  - 20A.2 General Art and Advanced Painting Classes
  - 20A.3 General Art and Ceramics Classes
- 21. Educational Groups, Driver Education
  - 21.1 Driver Education Classes
  - 21.2 Driver Education Classes
- 22. Education Groups, Home Economics
  - 22.1 Clothing, Home Decoration, Social Living Classes
  - 22.2 Foods Classes
  - 22.3 Home Nursing, Home Management and Clothing Classes
  - 22.4 Clothing Classes
  - 22.5 Clothing, Home Decoration, Social Living Classes
  - 22.6 Future Homemakers of America Meeting
- 23. Educational Groups, Music
  - 23.1 Girls Chorus Classes
  - 23.2 Vocal Music Classes
  - 23.3 Instrumental Music Classes,  
(Band, Orchestra and Instrumental Ensemble)
  - 23.4 Instrumental Music Classes,  
(Band, Orchestra and Instrumental Ensemble)
  - 23.5 Band Marching Practice
- 24. Educational Groups, Physical Education
  - 24.1 Physical Education Classes, Boys
  - 24.2 Physical Education Classes, Boys
  - 24.3 Physical Education Classes, Boys
  - 24.4 Physical Education Classes, Girls
  - 24.5 Physical Education Classes, Girls
  - 24.6 Physical Education Classes, Girls
  - 24.7 Cheerleaders Practice
  - 24.8 Troy Janes Meeting



- 24A. Educational Groups, Physical Education, Swimming
  - 24A.1 Swimming
  - 24A.2 Swimming at other school
  - 24A.3 Swimming Practice
  - 24A.4 Swimming, Boys Intramural
  - 24A.5 Swimming Club, Boys
  - 24A.6 Tadpole Club, Girls
  - 24A.7 Squid Club, Girls
- 25. Educational Groups, Shop and Agriculture
  - 25.1 Woodworking and Advanced Woodworking Classes
  - 25.2 Mechanical Drawing Classes
  - 25.3 Printing 1 and 2 and Vocational Printing Classes
  - 25.4 Electronics and Radio Classes
  - 25.5 Mechanical Drawing and Stage Classes
  - 25.6 Machine Shop Classes
  - 25.7 Auto Mechanics Classes
  - 25.8 Machine Shop Classes
  - 25.9 Photography Classes
  - 25.10 Electronics Classes
  - 25.11 Welding Classes
  - 25.12 Radio Classes
  - 25.13 Machine Shop Classes
  - 25.14 Auto Mechanics Classes
- 26. Elections
  - 26.1 All School Elections
- 26A. Elevators
  - 26A.1 Elevator
- 28. Fairs, Circuses, and Carnivals
  - 28.1 Homecoming Parade
  - 28.2 Senior Spring Carnival
- 29. Fire and Tornado Drills
  - 29.1 Fire Drill
  - 29.2 Tornado Drill
- 35. Food Sales
  - 35.1 Future Teachers Cookie Sale
- 36. Fund and Membership Drives
  - 36.1 Tag Day--American Field Service Assembly
  - 36.2 Quill and Scroll Sale of Book Protectors
  - 36.3 Junior Red Cross Annual Rummage Sale
  - 36.4 Junior Red Cross Chrysanthemum Corsage Sale
  - 36.5 Hi-Y High School Pennant Sale
  - 36.6 C Club Fund Raising Project
  - 36.7 Future Nurses Coke Bar
  - 36.8 Home Room Activity Card Sale
  - 36.9 Honor Pep Club Sale of Movie Discount Tickets
  - 36.10 Girls Pep Club Sale of Game Ribbons

- 39. Government and School Offices
  - 39.1 General Office
  - 39.2 Principal's Office
  - 39.3 Vice Principal's Office
  - 39.4 Guidance Office
  - 39.5 Visual Aids Office
  - 39.6 Point System Room
  - 39.7 Dean of Girls Office
  - 39.8 Dean of Boys and Adult Education Office
  - 39.9 Consultation Room
  - 39.10 Art Exhibit Room
  - 39.11 Lost and Found Room
  - 39.12 Check Room
  - 39.13 Cafeteria Director's Office
  - 39.14 Girls Gym Office
  - 39.15 Boys Gym Office
  - 39.16 Mathematics Office
  - 39.17 English Office
  - 39.18 Science Office
  - 39.19 Home Economics Office
  - 39.20 Social Studies Office
- 41. Hallways and Coatrooms
  - 41.1 Hallways and Lockers
- 48. Initiations
  - 48.1 Future Nurses Club Candelight Initiation
  - 48.2 Mathematics Club Initiation
  - 48.3 C Club Initiation and Chili Supper
  - 48.4 Quill and Scroll Initiation and Dinner at Kansas University
  - 48.5 French Club Initiation
  - 48.6 Science Club Officers Initiation at Spring Picnic
  - 48.7 Future Homemakers Initiation
- 52. Libraries
  - 52.1 Library
  - 52.2 Cataloguing Room
  - 52.3 Conference Room
- 54. Meetings, Executive
  - 54.1 Student Council Meeting
  - 54.2 Student Council Officers Meeting
  - 54.3 Home Room Representative Council Meeting
  - 54.4 Newspaper Staff Meeting
  - 54.5 Annual Staff Meeting
  - 54.6 Senior Class Officers Meeting
  - 54.7 Junior Class Officers Meeting
  - 54.8 Sophomore Class Officers Meeting
  - 54.9 Future Homemakers of America Cabinet Meeting
  - 54.10 Legislative Coordinating Committee Meeting
  - 54.11 Election Commission Meeting
  - 54.12 Membership Qualifications Committee Meeting
  - 54.13 Future Teachers Officers Meeting
  - 54.14 Mathematics Club Officers Meeting
  - 54.15 Future Nurses Officers and Committee Chairmen Meeting
  - 54.16 Band Business Meeting
  - 54.17 Junior Red Cross Council Meeting

- 55. Meetings, Organization Business
  - 55.1 Boys Pep Club Meeting
  - 55.2 Girls Regular Pep Club Meeting
  - 55.3 Officers Training Meeting
  - 55.4 Senior Class Meeting
  - 55.5 Junior Class Meeting
  - 55.6 Sophomore Class Meeting
  - 55.7 Girls Honor Pep Club Meeting
  - 55.8 Senior Boys Council Meeting
  - 55.9 Senior Girls Council Meeting
- 56. Meetings, Social Cultural
  - 56.1 Quill and Scroll Meeting
  - 56.2 Junior Red Cross Meeting
  - 56.3 Key Club Meeting
  - 56.4 Youth for Christ Meeting
  - 56.5 Y-Teens Meeting
  - 56.6 Hi-Y Meeting
  - 56.7 Science Club Meeting
  - 56.8 Math Club Meeting
  - 56.9 Business Education (Retail Selling) Club Meeting
  - 56.10 Business Education (Office Practice) Club Meeting
  - 56.11 French Club Meeting
  - 56.12 Future Teachers Club Meeting
  - 56.13 Future Nurses Club Meeting
  - 56.14 Safety Club Meeting
  - 56.15 Usher Club Meeting
  - 56.16 Thespians Meeting
  - 56.17 National Forensic League Chapter Meeting
  - 56.18 American Field Service Council Meeting
  - 56.19 Library Club Meeting
  - 56.20 Modern Dance Club Meeting
- 57. Meetings, Social Recreational
  - 57.1 Smoking Room
  - 57.2 Chess Club Meeting
  - 57.3 C Club Meeting
- 64. Open Spaces
  - 64.1 Play Area
- 65. Outings
  - 65.1 Band Trip to Perform
  - 65.2 Band and Orchestra See "The Music Man"
  - 65.3 String Ensemble Appearance for Women's Club
  - 65.4 String Ensemble See "My Fair Lady"
  - 65.5 Music Students Attend "The King and I" at Kansas University
  - 65.6 Science Students to Science-Math Day at Kansas University
  - 65.7 Junior and Senior "B" Average Students to New York and Washington
  - 65.8 Seniors Attend a Movie
  - 65.9 Home Management Classes Visit Gas Service Company
  - 65.10 Art, Crafts, Painting, and Ceramics Students to Art Conference at Kansas University
  - 65.11 Annual and Newspaper Staffs to Journalism Conference
  - 65.12 Advanced Physical Education Class to Modern Dance Clinic

65. Outings (cont'd)

- 65.13 Science Fair at Fair Grounds, Exhibits by Science Students
- 65.14 Science Club Field Trip
- 65.15 Library Club to Public Library
- 65.16 Business Education Club to Convention
- 65.17 Latin Convention at Kansas State Attended by Latin Students
- 65.18 Future Homemakers of America District Convention at Booth
- 65.19 Future Teachers and Future Homemakers Clubs Visit Exhibition Train
- 65.20 Future Nurses Club Visits Veterans Hospital
- 65.21 Thespians to "My Fair Lady"
- 65.22 Open House at Governor's Mansion for Capital City Students
- 65.23 Mr. L Home Room Members and Friends See A's Baseball Game
- 65.24 American Field Service Club Picnic at Lake
- 65.25 Junior Red Cross Party at Forbes
- 65.26 Junior Red Cross Goes Caroling
- 65.27 Junior Red Cross Picnic
- 65.28 Future Nurses Club Goes Caroling
- 65.29 Quill and Scroll Picnic
- 65.30 Hi-Y Overnight
- 65.31 Hi-Y Hayrack Ride
- 65.32 Band and Orchestra Picnic at Lake
- 65.33 Business Club Picnic Party at Lake
- 65.34 Key Club Hayrack Ride
- 65.35 C Club Hayrack Ride
- 65.36 Math Club Picnic

68. Parties

- 68.1 Youth for Christ Funspiration
- 68.2 Swimming Club Party
- 68.3 Boys Senior Council Party
- 68.4 Girls Council Coke Party
- 68.5 Annual Staff Party Given by Music Department Faculty
- 68.6 Honor Pep Ridiculous Party
- 68.7 Senior Girls Council Reception for Senior Home Room Teachers
- 68.8 Reception after Senior Vespers
- 68.9 Reception after Commencement
- 68.10 Sophomore Party
- 68.11 Pre-Election Party
- 68.12 Band and Orchestra Party and Dance
- 68.13 Math Club Christmas Party
- 68.14 Future Teachers Tea for Visiting College Representatives
- 68.15 Government Class Election Party

69. Photographers

- 69.1 Individual Pictures Taken
- 69.2 Photographic Rooms

70. Plays, Concerts, and Programs

- 70.1 Election Rally
- 70.2 Election Assembly
- 70.3 Election Assembly Practice
- 70.4 Regular Assembly
- 70.5 Pep Assembly
- 70.6 Christmas Assembly
- 70.7 Sophomore Induction Assembly
- 70.8 Junior and Sophomore Spelling Assembly



70. Plays, Concerts and Programs (cont'd)

- 70.9 State Music Festival
- 70.10 District Music Festival
- 70.11 Spring Band Concert
- 70.12 Orchestra Pop Concert
- 70.13 Madrigal Singers Program
- 70.14 Music Department Program for Masonic Family Night
- 70.15 Band Plays for United Funds Drive Kick-off Dinner
- 70.16 Annual Orchestra Concert
- 70.17 Vocal Concert at Kansas State Teachers Association Building
- 70.18 Ten School Orchestra Clinic at Capital City High School
- 70.19 Kansas State Choirs Program at Capital City High School
- 70.20 Debate Tournament, Experienced
- 70.21 Debate Tournament, Experienced at other school
- 70.22 Debate Tournament, Novice
- 70.23 Debate Tournament, Novice at other school
- 70.24 Dance Drama Company Program
- 70.25 Homecoming Assembly
- 70.26 Homecoming Rehearsal
- 70.27 Induction of Class and All School Officers
- 70.28 Induction Practice
- 70.29 Play Practice, "Tish"
- 70.30 Junior Sponsored Play, "Tish"
- 70.31 Play Practice, "Mousetrap"
- 70.32 Senior and Masque and Wig Sponsored WPA Play, "Mousetrap"
- 70.33 Play Practice, "Pygmalion"
- 70.34 Play, "Pygmalion"
- 70.35 Junior-Senior Program before the Prom
- 70.36 All School Christmas Program
- 70.37 Play Practice, Christmas Program
- 70.38 Operetta, "Carousel"
- 70.39 Operetta Practice
- 70.40 Fashion Show
- 70.41 Squid Show
- 70.42 Daisy Chain Rehearsal
- 70.43 Class Day Rehearsal

76. Recognition Programs

- 76.1 Commencement
- 76.2 Scholarship Assembly
- 76.3 Athletic Awards Assembly
- 76.4 Honor C Assembly
- 76.5 Class Day Ceremonies

77. Religious Services and Classes

- 77.1 Future Homemakers of America Church Day
- 77.2 Senior Vespers
- 77.3 Easter Service

80. Restaurants

- 80.1 School Cafeteria
- 80.2 Faculty Lunch Room
- 80.3 Kitchen

- 81. Restrooms
  - 81.1 Ladies' Faculty Lounge
  - 81.2 Men's Faculty Lounge
  - 81.3 Girls' Restroom
  - 81.4 Boys' Restroom
  - 81.5 Girls' Shower Room
  - 81.6 Boys' Shower Room
- 83. School, Coaches' Rooms
  - 83.1 Coaches' Room
- 84. Custodians' Rooms
  - 84.1 Custodians' Boiler Room and Lounge
- 85. School, Special Days
  - 85.1 Student Registration for Elections
  - 85.2 Education-Business Day
  - 85.3 College Representative Day
  - 85.4 Occupational Information Day
  - 85.5 Examination Day
- 86. School, U. S. Savings Stamps Sales
  - 86.1 Stamp Sales by Retail Selling Class
- 95. Volunteer Work and Fund Raising Projects
  - 95.1 Junior Red Cross Pack Overseas Boxes
  - 95.2 Junior Red Cross Wrap Gifts for State Hospital
  - 95.3 Future Teachers Club Ushers for Teachers Convention
  - 95.4 Future Homemakers of America Clothing Drive for Needy Children
  - 95.5 Future Nurses Club Assist at Polio Clinic
  - 95.6 Future Nurses Club Assist in Tuberculin Testing Program
  - 95.7 Basketball Cadet Activities
  - 95.8 Football Cadet Activities
  - 95.9 Play Cadet Activities
  - 95.10 Junior-Senior Prom Committees Car Wash
  - 95.11 Red Cross Club Spring Party for Patients at Veterans Hospital
  - 95.12 Future Nurses Club Help at State Fair
  - 95.13 Science Club Assisted at Science Fair
  - 95.14 Junior Red Cross Served at Red Cross Staff Dinner

Appendix 6.1  
Behavior Setting Report

Introduction

Hello. I'm \_\_\_\_\_ from the University of Kansas; this is \_\_\_\_\_, also from the University. We are asking your help today in a second part of a study of various Kansas high schools. As you know, people are showing more and more interest in improving education in schools. One of the biggest problems is that ideas about schools are often just ideas; we need facts--research findings--to help decide which good things need strengthening, which things need changing.

We do hear people say,--"Well, schools were a lot different when I went to school." Now they might be right but we really don't know this. The best way to know what a school is like is to study it as it exists now. We want to get information from people who are in school now--from students.

A large part of the questionnaire you will be working on today was carefully created by our staff who made a survey of all the activities and places you might enter in this school, this semester. (Next sentence for Capital City only: Maybe you'll be surprised how many things go on in this school). What we have then is a kind of picture of activities across this school--and over the time extending from the first day of school this September until now. What we don't have is a picture of how students fit into this picture. We want you to help us put the students in the picture.

Your help to us has two parts--the first part is to tell us which of these activities you were a part of--at least once--this semester.

Let's look at the front page of the questionnaire. Notice where it says Made Up Examples Part I. Suppose a boy Joe were taking the questionnaire: Joe looks at the activity or place--goes across and circles No or Yes to indicate whether he was at a German Club meeting this semester. Joe ignores the number 56 in the parentheses;--he also ignores--for the time being--the blank spaces under performances.

Some of these items are obvious and easy to answer. You may have some question about offices. For example, Joe said he had not attended the Scholarship Records Office. To attend or participate in an office means to go there on business of some kind. Of course, it's obvious that if you work in an office you would say yes, but if you were a person seeking information, or help, you also enter the office activity.

So all you have to do for most of this first part is simply ask yourself--was I a part of this activity or of this setting and circle yes or no. (Next sentence--Capital City only: Since we took everything that exists in the school, there will be a lot of No answers--this is to be expected.) Any questions?

If you do have any questions that come up as you work along, just raise your hand and one of us will come to help you. That's what we're here for--to help you make the information accurate--if it is accurate then people who are trying to improve education will have real information to go by.

All right, work through the list answering each item and the material after the list. What did you do this semester--from school opening in September until

today? Start by filling in the top of the front page. We will tell you about the second part of the job later.

We tried very hard to list all the activities which actually happened but we may have overlooked some. If you added any to our list, will you tell us now so that we can put them on the board for other students to add to their lists. (After most people have finished the list--not necessarily the material after the list, say...)

Would you mark where you are on the questionnaire and then turn back to the front page? You can finish it shortly.

The second part of the job is to fill in the blanks in those cases where you circled yes. We want you to tell us what you did in the activities and places you attended. We need a special kind of information written in. Let me tell you what we are going to do with it. We are going to try to decide whether you were a performer in the activity.

A performer is one who has a special job in a place or activity to keep it going. Sometimes we are performers, sometimes we are customers, members, watchers.

Let's look at Made Up Examples Part II. Here we have some of Joe's Yes answers. For the Baseball Game, Joe writes--"just watched." Joe was a fan. He was not a performer--performers at games between schools would be players, cheerleaders, officials, pep club members, refreshment sellers, etc. Look at Easter Assembly--Joe wrote "sang in choir." At the assembly, the people on stage, the stage hands, the musicians, would be performers--the audience would not be performers. Look at Checker Club. Joe wrote "recorded winners"--apparently the club had a contest and Joe helped run the contest--he was a performer then. Members of the club who just took part but had no special job would not be performers. And now the Hi-Y Poppy Sale--Joe wrote "bought poppy"--he was a customer. Cashiers and salesmen at the sale would be performers.

We want you then--as the last part of the questionnaire--to fill in the blanks by yes answers with what you did there; tell us the kind of "what I did information" that will let us decide if you were performers. If--at a game--you played in the band, ate a hot dog and watched the game, we want the playing in the band part, because band members playing for an occasion are performers.

Be sure to ask us if any of this seems confusing--you don't have to decide if you were a performer or not--just give us the information so we can decide. All right go on and finish.



Midwest High School

Name

(last)

(first)

(middle)

Boy Girl (circle wh

Address

Made Up Examples--Part I

German Club regular meeting

(56) ☐ No ☒ Yes

Home Baseball Game

(3) ☐ No ☒ Yes

Booster Club candy sale

(25) ☐ No ☒ Yes

Scholarships Records Office

(39) ☐ No ☒ Yes

Easter Assembly

(70) ☐ No ☒ Yes

Tennis Matches another school

(1) ☐ No ☒ Yes

etc.

Made Up Examples--Part II

Home Baseball Game

(3) ☐ No ☒ Yes

Easter Assembly

(70) ☐ No ☒ Yes

Checker Club

(68) ☐ No ☒ Yes

Hi-Y Poppy Sale

(25) ☐ No ☒ Yes

etc.

*just watched*  
*sang in choir*  
*recorded winner*  
*bought poppy*

Basketball

Performance Information

Home Basketball Game, Boys "A" and "B"  
Teams and Girls

(1) No Yes

Basketball Game, Boys "A" and "B"  
Teams and Girls at another school

(1) No Yes

Basketball Practice, Boys

(1) No Yes

Basketball Practice, Girls

(1) No Yes

Football

Home Football Game

(2) No Yes

Football Game at another school

(2) No Yes

Football Practice

(2) No Yes

Home Football Game, "B" Team

(2) No Yes

Cheerleader

Cheerleader Practice

(24) No Yes

Clubs

Harlequin Club meeting

(56) No Yes

Harlequin Club try outs

(70) No Yes

Harlequin Club family night show  
and movie

(70) No Yes

Harlequin Club trip to "King and I"

(65) No Yes

Harlequin Club trip to "Music Man"

(65) No Yes

Thespian and Harlequin Club,  
Installation Program

(70) No Yes

Thespian Club meeting

(55) No Yes

Le Bon Ton Club meeting

(55) No Yes

Teenage Book Club secretaries meeting

(55) No Yes

Girls Pep Club meeting

(55) No Yes

Student Government

|                         |      |    |     |       |
|-------------------------|------|----|-----|-------|
| Student Council meeting | (54) | No | Yes | _____ |
| Junior Class meeting    | (55) | No | Yes | _____ |

School Offices

|                      |      |    |     |       |
|----------------------|------|----|-----|-------|
| Principal's Office   | (39) | No | Yes | _____ |
| Ditto Room           | (39) | No | Yes | _____ |
| Custodian's Room     | (84) | No | Yes | _____ |
| Coach's Room         | (83) | No | Yes | _____ |
| Le Bon Ton Club Room | (81) | No | Yes | _____ |

Library

|                        |      |    |     |       |
|------------------------|------|----|-----|-------|
| Library and Study Hall | (20) | No | Yes | _____ |
|------------------------|------|----|-----|-------|

Plays

|                            |      |    |     |       |
|----------------------------|------|----|-----|-------|
| Junior Class Play          | (70) | No | Yes | _____ |
| Junior Class Play practice | (70) | No | Yes | _____ |

Journalism

|                                        |      |    |     |       |
|----------------------------------------|------|----|-----|-------|
| Cub Reporter & Yearbook Staff to K.U.  | (65) | No | Yes | _____ |
| Cub Reporter Poll on national election | (26) | No | Yes | _____ |
| Cub Reporter Poll on school attitudes  | (26) | No | Yes | _____ |

Dances and Parties

|                               |      |    |     |       |
|-------------------------------|------|----|-----|-------|
| Homecoming Dance              | (15) | No | Yes | _____ |
| Dance following football game | (15) | No | Yes | _____ |

All School Events to Make Money

|                                            |      |    |     |       |
|--------------------------------------------|------|----|-----|-------|
| Students Magazine Subscription Sale        | (36) | No | Yes | _____ |
| Seniors sell sweatshirts                   | (36) | No | Yes | _____ |
| Pep Club Food Sale                         | (35) | No | Yes | _____ |
| Parent-Teacher Book Exchange               | (8)  | No | Yes | _____ |
| P.T.A. sponsored Carnival and Chili Supper | (28) | No | Yes | _____ |
| Senior Car Wash                            | (95) | No | Yes | _____ |
| Senior Class Candy Sale at School          | (35) | No | Yes | _____ |

Assemblies

|                                                         |      |    |     |       |
|---------------------------------------------------------|------|----|-----|-------|
| High School Opening Assembly                            | (70) | No | Yes | _____ |
| High School Assembly                                    | (70) | No | Yes | _____ |
| All School Lyceum (Pay Assemblies)                      | (70) | No | Yes | _____ |
| Special Assembly Programs (Veteran's Day, Thanksgiving) | (70) | No | Yes | _____ |
| Pep Club Rally                                          | (70) | No | Yes | _____ |

Eating Places

|                               |      |    |     |       |
|-------------------------------|------|----|-----|-------|
| School Lunch Room and Kitchen | (80) | No | Yes | _____ |
|-------------------------------|------|----|-----|-------|

Miscellaneous

|                           |      |    |     |       |
|---------------------------|------|----|-----|-------|
| Student Panel at P.T.A.   | (70) | No | Yes | _____ |
| Career Day at Winchester  | (65) | No | Yes | _____ |
| Le Bon Ton Clothing Drive | (36) | No | Yes | _____ |



We might have overlooked some school activities. If you took part in some school occasions not on this list, would you write them in?

Activity

Performance Information

(use back of page if necessary)

(The following settings were added. They were each put on the blackboard and announced to the group with the request that any student who had attended add the name to his list.)

|                                         |      |       |
|-----------------------------------------|------|-------|
| Band Marches in Halloween Parade        | (28) | _____ |
| Harlequin Club Officers meeting         | (54) | _____ |
| Home Ec. Class serves Principals Dinner | (17) | _____ |
| Le Bon Ton Dinner                       | (17) | _____ |
| Science and Math Day at K. U.           | (65) | _____ |

Students sometimes take part in groups and organizations outside of school. Let's take church as one possibility. Students could attend Sunday School, Church, Mass, Synagogue, or Young People's Group Meeting, etc. They might be performers in some of these: sing in church choir, teach Sunday School, lead Young People's Worship Service, etc. If you took part in any church-related activities this semester, would you write them in below? If you performed in any, please write in the performance.

Church Activity

Performance Information

|       |       |
|-------|-------|
| _____ | _____ |
| _____ | _____ |

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(Use back of this sheet for additional church activities)

Students might also take part in other organizations. Examples would be Scout meeting, Bowling Team contests, 4-H meetings, music group meetings, Rainbow girls party, etc. Students might be performers in some of these: serve as assistant scoutmaster, handle refreshments at club party, etc. Would you write in any of these affairs you have attended and put in any performances?

Organization Activities

Performance Information

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(Use back of this page for any additions)

WORK

Have you worked for pay THIS SEMESTER? (circle which)      No      Yes

What kind of work did you do? \_\_\_\_\_

If you worked for a company or organization, please name it:

---

Did you work for pay LAST SUMMER?      No      Yes

What kind of work did you do? \_\_\_\_\_

If you worked for a company or organization, please name it:

---

Would you fill in your present schedule?

|                        | <u>Subject</u> | <u>Teacher</u> |
|------------------------|----------------|----------------|
| 1st Period             | _____          | _____          |
| 2nd Period             | _____          | _____          |
| 3rd Period             | _____          | _____          |
| 4th Period             | _____          | _____          |
| 5th Period             | _____          | _____          |
| 6th Period             | _____          | _____          |
| 7th Period             | _____          | _____          |
| 8th Period<br>(if any) | _____          | _____          |

The format, instructions, and questions regarding out-of-school activity and school schedule were identical in all schools. In order to save space, we present the behavior setting list for the Capital City High School Settings Report spaced more closely than it was given the students. The B was not marked in the questionnaire. It indicates bloopers, fictitious but likely sounding settings which served to give an indication of the accuracy of the responses as a whole.

Capital City High School Settings Listed on School Setting Report

Performance Information

Basketball

|                                                      |     |    |     |       |
|------------------------------------------------------|-----|----|-----|-------|
| Home Basketball Game, "A" and "B" Teams              | (1) | No | Yes | _____ |
| Basketball Game, "A" and "B" Teams at another school | (1) | No | Yes | _____ |
| Basketball Practice, "A" and "B" Teams               | (1) | No | Yes | _____ |
| Basketball Practice, Sophomore                       | (1) | No | Yes | _____ |
| B Sophomore-Junior Basketball Game                   | (1) | No | Yes | _____ |

Wrestling

|                                             |     |    |     |       |
|---------------------------------------------|-----|----|-----|-------|
| Home Wrestling Match, "A" Team              | (1) | No | Yes | _____ |
| Wrestling Match, "A" Team at another school | (1) | No | Yes | _____ |
| Wrestling Team Practice                     | (1) | No | Yes | _____ |

Swimming

|                                 |       |    |     |       |
|---------------------------------|-------|----|-----|-------|
| Swimming Meet Home              | (24A) | No | Yes | _____ |
| Swimming Meet at another school | (24A) | No | Yes | _____ |
| Swimming Team Practice          | (24A) | No | Yes | _____ |
| Swimming Club--Boys             | (24A) | No | Yes | _____ |
| Swimming Team Party             | (68)  | No | Yes | _____ |
| Tadpole Club (Girls)            | (24A) | No | Yes | _____ |
| Squid Club (Girls)              | (24A) | No | Yes | _____ |

Football

|                                            |      |    |     |       |
|--------------------------------------------|------|----|-----|-------|
| Home Football Game "A" (Varsity) Team      | (2)  | No | Yes | _____ |
| Football Game, "A" Team at another school  | (2)  | No | Yes | _____ |
| Home Football Game, "B" Team               | (2)  | No | Yes | _____ |
| Football Game, "B" Team at another school  | (2)  | No | Yes | _____ |
| Football Practice, "A" and "B" Teams       | (2)  | No | Yes | _____ |
| Home Football Game, Sophomore              | (2)  | No | Yes | _____ |
| Football Game, Sophomore at another school | (2)  | No | Yes | _____ |
| Football Practice, Sophomore               | (2)  | No | Yes | _____ |
| B Sophomore-Junior Touch Football Game     | (2)  | No | Yes | _____ |
| Football Banquet                           | (17) | No | Yes | _____ |

Cross Country Racing

|                                      |     |    |     |       |
|--------------------------------------|-----|----|-----|-------|
| Cross Country Race                   | (2) | No | Yes | _____ |
| Cross Country Race at another school | (2) | No | Yes | _____ |
| Cross Country Practice               | (2) | No | Yes | _____ |

Girls Intramural Sports

|                               |     |    |     |       |
|-------------------------------|-----|----|-----|-------|
| Basketball, Girls Intramural  | (1) | No | Yes | _____ |
| Volleyball, Girls Intramural  | (1) | No | Yes | _____ |
| Deck Tennis, Girls Intramural | (1) | No | Yes | _____ |
| Badminton, Girls Intramural   | (1) | No | Yes | _____ |
| Trampoline Activities, Girls  | (1) | No | Yes | _____ |

Cheerleaders

|                      |      |    |     |       |
|----------------------|------|----|-----|-------|
| Cheerleader try outs | (70) | No | Yes | _____ |
| Cheerleader meetings | (24) | No | Yes | _____ |



Clubs

|                                                                                   |      |    |     |  |
|-----------------------------------------------------------------------------------|------|----|-----|--|
| American Field Service regular meeting                                            | (56) | No | Yes |  |
| Business Education regular club meeting                                           | (56) | No | Yes |  |
| Business Education Convention in Emporia                                          | (65) | No | Yes |  |
| Chess Club regular meeting                                                        | (57) | No | Yes |  |
| Coin Club regular meeting                                                         | (56) | No | Yes |  |
| B Electronics Club regular meeting                                                | (57) | No | Yes |  |
| Future Business Leaders regular meeting                                           | (56) | No | Yes |  |
| Forensic League regular meeting                                                   | (56) | No | Yes |  |
| French Club regular meeting                                                       | (56) | No | Yes |  |
| Future Homemakers regular meeting                                                 | (22) | No | Yes |  |
| Future Homemakers Cabinet meeting                                                 | (54) | No | Yes |  |
| Future Nurses Club regular meeting                                                | (56) | No | Yes |  |
| Future Nurses Officers and Committee Chairmen meeting                             | (54) | No | Yes |  |
| Future Nurses Club visits Veterans Hospital                                       | (65) | No | Yes |  |
| Future Nurses Club helps with Health Booth at Fair                                | (65) | No | Yes |  |
| Future Nurses Club visits K.N.I.                                                  | (65) | No | Yes |  |
| Future Teachers Club meeting                                                      | (56) | No | Yes |  |
| Future Teachers Club Tea for visiting college representatives (KU, KSt, Washburn) | (68) | No | Yes |  |
| Future Teachers usher at KSTA meeting                                             | (95) | No | Yes |  |
| Future Teachers officers meeting                                                  | (54) | No | Yes |  |
| Hi-Y regular meeting                                                              | (56) | No | Yes |  |
| Hi-Y overnight trip                                                               | (65) | No | Yes |  |
| Key Club regular meeting                                                          | (56) | No | Yes |  |
| Key Club hayrack ride                                                             | (65) | No | Yes |  |
| Latin Club regular meeting                                                        | (56) | No | Yes |  |
| Library Club regular meeting                                                      | (56) | No | Yes |  |
| Library Club to city library                                                      | (65) | No | Yes |  |
| Masque & Wig regular meeting                                                      | (56) | No | Yes |  |
| Mathematics Club regular meeting                                                  | (56) | No | Yes |  |
| Mathematics Club hayrack ride                                                     | (65) | No | Yes |  |
| Mathematics Club officers meeting                                                 | (54) | No | Yes |  |
| Modern Dance Club regular meeting                                                 | (56) | No | Yes |  |
| Pep Club regular meeting, Boys                                                    | (55) | No | Yes |  |
| Pep Club regular meeting, Girls                                                   | (55) | No | Yes |  |
| Honor Pep Club regular meeting                                                    | (55) | No | Yes |  |
| B Photography Club regular meeting                                                | (56) | No | Yes |  |
| Radio, Ham regular meeting                                                        | (25) | No | Yes |  |
| Junior Red Cross regular meeting                                                  | (56) | No | Yes |  |
| Junior Red Cross Council meeting                                                  | (54) | No | Yes |  |
| Junior Red Cross goes carolling                                                   | (65) | No | Yes |  |
| Junior Red Cross packs overseas boxes                                             | (95) | No | Yes |  |
| Junior Red Cross wraps gifts for state hospital                                   | (95) | No | Yes |  |
| Junior Red Cross helps at regional Red Cross meeting                              | (95) | No | Yes |  |
| Safety Club regular meeting                                                       | (56) | No | Yes |  |
| Science Club regular meeting                                                      | (56) | No | Yes |  |
| Science Students to Science-Math Day at KU                                        | (65) | No | Yes |  |
| Science Club Field Trip                                                           | (65) | No | Yes |  |

|                                                  |      |    |     |  |
|--------------------------------------------------|------|----|-----|--|
| Spanish Club regular meeting                     | (56) | No | Yes |  |
| C Club regular meeting                           | (57) | No | Yes |  |
| C Club concessions at Jr. High Play Day          | (36) | No | Yes |  |
| C Club hayrack ride                              | (65) | No | Yes |  |
| Thespian Club regular meeting                    | (56) | No | Yes |  |
| Youth for Christ regular meeting                 | (56) | No | Yes |  |
| Youth for Christ Funspiration party              | (68) | No | Yes |  |
| <u>Student Government Group Meetings</u>         |      |    |     |  |
| Student Council meeting                          | (54) | No | Yes |  |
| Home Room Representative Council                 | (54) | No | Yes |  |
| Student Congress meeting                         | (54) | No | Yes |  |
| Student Council officers meeting                 | (54) | No | Yes |  |
| Junior Home Room Representative Council meeting  | (54) | No | Yes |  |
| Junior Class Officers meeting                    | (54) | No | Yes |  |
| Officers Training meeting                        | (55) | No | Yes |  |
| <u>Debates</u>                                   |      |    |     |  |
| Debate Clinic (Sept. 23)                         | (20) | No | Yes |  |
| Debate Tournament, experienced                   | (70) | No | Yes |  |
| Debate Tournament, experienced at another school | (70) | No | Yes |  |
| Debate Tournament, novice                        | (70) | No | Yes |  |
| Debate Tournament, novice at another school      | (70) | No | Yes |  |
| B Sunflower Debate League dinner                 | (70) | No | Yes |  |
| <u>School Offices</u>                            |      |    |     |  |
| General Office                                   | (39) | No | Yes |  |
| Principal's Office                               | (39) | No | Yes |  |
| Vice-Principal's Office                          | (39) | No | Yes |  |
| Dean of Girls Office                             | (39) | No | Yes |  |
| Dean of Boys and Adult Education Office          | (39) | No | Yes |  |
| Guidance Office                                  | (39) | No | Yes |  |
| Visual Aids Office                               | (39) | No | Yes |  |
| Point System Room                                | (39) | No | Yes |  |
| Book Rental and Exchange Room                    | (8)  | No | Yes |  |
| School Nurses Office                             | (18) | No | Yes |  |
| Vision Testing Program                           | (18) | No | Yes |  |
| Library                                          | (52) | No | Yes |  |
| Cataloguing Room                                 | (52) | No | Yes |  |
| Art Exhibit Room                                 | (39) | No | Yes |  |
| Lost and Found Room                              | (39) | No | Yes |  |
| Check Room                                       | (39) | No | Yes |  |
| Cafeteria Director's Office                      | (39) | No | Yes |  |
| Girls Gym Office                                 | (39) | No | Yes |  |
| Boys Gym Office                                  | (39) | No | Yes |  |
| Mathematics Office                               | (39) | No | Yes |  |
| English Office                                   | (39) | No | Yes |  |
| Science Office                                   | (39) | No | Yes |  |
| Home Economics Office                            | (39) | No | Yes |  |
| Social Studies Office                            | (39) | No | Yes |  |
| Biology Office                                   | (39) | No | Yes |  |
| Coaches Room                                     | (83) | No | Yes |  |

School Election Activities

|                                 |      |    |     |  |
|---------------------------------|------|----|-----|--|
| Registration for election       | (26) | No | Yes |  |
| Qualification Committee meeting | (54) | No | Yes |  |
| Election Commission meeting     | (54) | No | Yes |  |
| Election Rally                  | (70) | No | Yes |  |
| All School election             | (26) | No | Yes |  |
| Annual election party           | (68) | No | Yes |  |
| Induction Assembly practice     | (70) | No | Yes |  |
| Induction Assembly              | (70) | No | Yes |  |

School Dances and Parties

|                                          |      |    |     |  |
|------------------------------------------|------|----|-----|--|
| Varsity Dances after games               | (15) | No | Yes |  |
| Girls Coke Party given by Honor Pep Club | (68) | No | Yes |  |
| B Girls Fashion Show and Tea             | (68) | No | Yes |  |
| W.P.A. Halloween party and dance         | (15) | No | Yes |  |
| Veranda After-School dance               | (15) | No | Yes |  |

School Events to Raise Money

|                                                                       |      |    |     |  |
|-----------------------------------------------------------------------|------|----|-----|--|
| Quill and Scroll sale of book protectors                              | (36) | No | Yes |  |
| Library Club book sale                                                | (52) | No | Yes |  |
| Junior Red Cross chrysanthemum sale                                   | (36) | No | Yes |  |
| Girls Pep Club sells game ribbons, sweatshirts, basketball pins       | (36) | No | Yes |  |
| Junior Class sells Christmas cards                                    | (36) | No | Yes |  |
| Future Nurses cookie sale                                             | (36) | No | Yes |  |
| Student Council collects money, clothing, food for Thanksgiving boxes | (36) | No | Yes |  |

Assemblies

|                               |      |    |     |  |
|-------------------------------|------|----|-----|--|
| Pep rallies                   | (70) | No | Yes |  |
| Regular assembly              | (70) | No | Yes |  |
| Homecoming assembly try outs  | (70) | No | Yes |  |
| Homecoming assembly rehearsal | (70) | No | Yes |  |
| Homecoming assembly           | (70) | No | Yes |  |
| Thanksgiving assembly         | (70) | No | Yes |  |
| Christmas assembly try outs   | (70) | No | Yes |  |
| Christmas assembly rehearsal  | (70) | No | Yes |  |

Plays

|                             |      |    |     |  |
|-----------------------------|------|----|-----|--|
| "Your Show" try outs        | (70) | No | Yes |  |
| "Your Show" rehearsal       | (70) | No | Yes |  |
| "Your Show" performance     | (70) | No | Yes |  |
| "Blithe Spirit" try outs    | (70) | No | Yes |  |
| "Blithe Spirit" rehearsal   | (70) | No | Yes |  |
| "Blithe Spirit" performance | (70) | No | Yes |  |
| "South Pacific" try outs    | (70) | No | Yes |  |

Music Programs and Activities

|                                             |      |    |     |  |
|---------------------------------------------|------|----|-----|--|
| Orchestra Pop Concert                       | (70) | No | Yes |  |
| All City Orchestra clinic                   | (23) | No | Yes |  |
| Orchestra plays at Capper Jr. High          | (65) | No | Yes |  |
| Orchestra plays at Safety Conference        | (65) | No | Yes |  |
| Band business meeting                       | (55) | No | Yes |  |
| B Band and Choir evening concert            | (70) | No | Yes |  |
| Madrigal Singers perform for outside groups | (65) | No | Yes |  |
| Choir sings at Benefit (Cerf spoke)         | (65) | No | Yes |  |



Journalism and Photography

|                                                   |      |    |     |       |
|---------------------------------------------------|------|----|-----|-------|
| Newspaper (World) Staff Meeting                   | (54) | No | Yes | _____ |
| Yearbook (Sunflower) Staff Meeting                | (54) | No | Yes | _____ |
| World Staff conducts Presidential poll            | (26) | No | Yes | _____ |
| Students to Journalism Conference at<br>Manhattan | (65) | No | Yes | _____ |
| Individual pictures taken                         | (69) | No | Yes | _____ |
| Photographic Rooms for school publications        | (69) | No | Yes | _____ |

Eating Places

|                    |      |    |     |       |
|--------------------|------|----|-----|-------|
| School Cafeteria   | (80) | No | Yes | _____ |
| Faculty Lunch Room | (80) | No | Yes | _____ |
| Cafeteria Kitchen  | (80) | No | Yes | _____ |

Miscellaneous

|                                                            |      |    |     |       |
|------------------------------------------------------------|------|----|-----|-------|
| B Boys Science and Hobby Show                              | (70) | No | Yes | _____ |
| Open House and Dinner for Parents                          | (17) | No | Yes | _____ |
| B Victory Carnival                                         | (28) | No | Yes | _____ |
| Group to see Bellamy Award Representatives<br>off to Maine | (65) | No | Yes | _____ |
| Home Room activity card sale                               | (36) | No | Yes | _____ |
| Smoking Room                                               | (57) | No | Yes | _____ |
| Homecoming Parade                                          | (28) | No | Yes | _____ |

We might have overlooked some school activities. If you took part in some school occasions not on this list, would you write them in? (The following settings were added. They were each put on the blackboard and announced to the group with the request that any student who had attended add the name to his list).

|                                       |      |    |     |       |
|---------------------------------------|------|----|-----|-------|
| Advisory Committee for West High      | (54) | No | Yes | _____ |
| All School Party try outs             | (70) | No | Yes | _____ |
| All School Party rehearsal            | (70) | No | Yes | _____ |
| French Club Christmas Party           | (68) | No | Yes | _____ |
| Future Teachers Cookie and Apple Sale | (36) | No | Yes | _____ |
| Y-Teens Meeting                       | (56) | No | Yes | _____ |
| Library Club Christmas Party          | (68) | No | Yes | _____ |
| Boys Glee Club, away                  | (70) | No | Yes | _____ |
| Clarinet Choir, away                  | (70) | No | Yes | _____ |
| Modern Dance, away                    | (70) | No | Yes | _____ |
| Girls Glee Club, away                 | (70) | No | Yes | _____ |



Appendix 7.1  
Instructions for Remembering Last Semester

You probably remember that last December you helped us out by filling out a questionnaire about school activities. These questionnaires have all been studied by our group and we are back today to ask your help in the next important step. Those questionnaires, in a way, were records of student's lives over about a three-month period. It reminds one of the "This Is Your Life" idea on T.V. The questionnaires tell what activities you were in and a little of what you did then. The question now is: What did participation in these things mean to you?

We are asking your help in gaining some understanding about what school activities and classes do to or do for students. This is the way we'll handle it: I am going to return your questionnaires. You look it over; try to recall how it was last fall in these activities. Which were the best in terms of what you got out of them--which were not-so-good?

A second questionnaire will be given out which you can use to tell what the activities meant to you. You will notice that the second questionnaire has four sheets: one page for "plus" or good activities or settings; one for "minus" or not-so-good activities; one for "plus" classes and one for "minus" classes.

Let me pass these out now and give you a chance to look them over and get accustomed to thinking about them. Don't start to write yet--just get used to it; I'd like to say something else before you actually start.

(Pass out; leave about three minutes for perusal of material.)

The care and thought you invest in answering the part called explanation will make a big difference; we are doing the same thing in other schools in a real effort to find out what activities mean to students; we already know from the first questionnaire where you were; next question is: What did you get out of it? What specifically was good about the plus settings--what specifically was bad about the minus ones. I hope you will be able to say more than "I liked it" or "I didn't like it"--this is some help, but not much!

(Give following slowly and with clarity.)

When trying to explain what's good about an activity, there are two ways of thinking which can help: You know that we all have desires, needs, wants; we can think of which of our desires or needs gets satisfied in the activity and explain it that way. The other way to look at an activity or setting is to think about the setting itself; it has a number of parts or aspects. Try to remember which part in particular was good, satisfying, worthwhile, and write about that. Using these two helps, you should be able to explain in a way so we can understand what the activity or setting meant to you.

In somewhat the same way you can explain about the minus settings or classes. Think of what things you don't like, are bothersome, and about what parts of the setting were not enjoyable or worthwhile.

You should all feel free to write exactly what you think, we will keep these answers confidential, and when our study on schools is written up there will be no names used--this material is for our use, and only general information is given to schools.

You notice that we have room for three activities or classes per page. Three is just our guess at how many might be chosen. In other schools, students have chosen as many as ~~six~~--as few as one. You don't have to do three, take as many as were real good, and as many as were not so good; this might be two, or three, or six, or whatever. Don't feel you have to stop at three--just because there are three numbered spaces. It is possible to have more for one section than another.

There ~~have~~ been students for whom a setting was particularly good in some ways, and particularly poor in others.

This problem can be handled by putting the setting on the plus page and giving the good points, and then putting it on the minus page and giving the bad points. You can do this if there is a setting which was definitely both plus and minus.

Do you have any questions? (Answer questions.)

Okay. Look over your first questionnaire--pick the best settings for last semester and write about them.

If a question comes up, just raise your hand and I'll talk to you personally--that way we'll not disturb the others.

We appreciate your help very much.

REMEMBERING LAST SEMESTER

Name \_\_\_\_\_

NAMES OF

EXPLANATION OF

Settings which were especially good, satisfying, worth-while—"plus."

What I did, or what went on, that made settings good—"plus." What I enjoyed or got out of the setting.

1. \_\_\_\_\_

1.

2. \_\_\_\_\_

2.

3. \_\_\_\_\_

3.

(Other good settings could be listed on the back)

(Other explanations could be put on back)

NOTE: The three following pages were identical except that page 2 asked for minus settings and pages 3 and 4 for plus and minus classes.

Appendix 8.1  
Variables Used in the Identification of Regular  
and Marginal Students, with Comparative Weights Shown

| <u>Variable</u> | <u>Weight</u> |
|-----------------|---------------|
|-----------------|---------------|

IQ

|                          |   |
|--------------------------|---|
| 105 and higher . . . . . | 1 |
|--------------------------|---|

|                        |   |
|------------------------|---|
| 99 and lower . . . . . | 2 |
|------------------------|---|

The six-point IQ difference between the subject groups was introduced to avoid too great similarity on this variable.

Academic performance during semester of measurement

|                                   |   |
|-----------------------------------|---|
| No grade lower than "C" . . . . . | 1 |
|-----------------------------------|---|

|                                    |   |
|------------------------------------|---|
| Two grades "D" and lower . . . . . | 2 |
|------------------------------------|---|

Here again the distribution was spread and the extreme groups chosen.

Occupation of father, using a scheme based on the Minnesota Occupational Rating Scale

|                                       |   |
|---------------------------------------|---|
| Professional and managerial . . . . . | 1 |
|---------------------------------------|---|

|                                             |   |
|---------------------------------------------|---|
| Nonprofessional and nonmanagerial . . . . . | 2 |
|---------------------------------------------|---|

Father's education

|                                    |   |
|------------------------------------|---|
| Father finished grade 10 . . . . . | 1 |
|------------------------------------|---|

|                                          |   |
|------------------------------------------|---|
| Father did not finish grade 10 . . . . . | 2 |
|------------------------------------------|---|

Mother's education

|                                    |   |
|------------------------------------|---|
| Mother finished grade 12 . . . . . | 1 |
|------------------------------------|---|

|                                          |   |
|------------------------------------------|---|
| Mother did not finish grade 12 . . . . . | 2 |
|------------------------------------------|---|

In the review of the literature it was found that a slight differential in parental education correlated with dropping out and staying in; i.e., a slightly lower finishing level for father than for mother.



Appendix 8.2  
Examples of Units from the Open-Ended Data  
Coded as Own and Foreign Forces

| Own Forces                                                                   | Foreign Forces                                                          |
|------------------------------------------------------------------------------|-------------------------------------------------------------------------|
| I like to dance.                                                             | Pep club members were required to go.                                   |
| It was a chance for me to do something new.                                  | Everyone was supposed to be there.                                      |
| I wanted to win a prize.                                                     | My Latin teacher talked me into it.                                     |
| I wanted to meet new people.                                                 | I had to; they needed girls in the cast.                                |
| It's interesting and exciting to go on these rallies.                        | Band members were required to go.                                       |
| It sounded like an interesting play.                                         | I was in the pep club, so I had to.                                     |
| I like to <u>do</u> things.                                                  | I had to march in the band.                                             |
| I like to act; I like to get in front of people and show them what I can do. | Everyone else was going.                                                |
| Dramatics is good for students; you learn confidence and security.           | It was really part of English class activity, so I had to take part.    |
| It was something new for me.                                                 | My family urged me to take part.                                        |
| I like to be someone special and show off.                                   | I was asked to sell magazines.                                          |
| I like to play basketball.                                                   | There are only five boys in the class; they had to have me in the play. |
| I wanted to gain experience.                                                 | I had to bring my sister.                                               |
| I like to dance with girls.                                                  | I was assigned to work there.                                           |
|                                                                              | The home room teacher asked us to go.                                   |

Appendix 8.3  
Card-Sort Items for the Five Actual Settings

1. I thought I might learn something there.
2. It was a chance for me to do or see something new and different.
3. It gave me a chance to be with the other kids.
4. I liked that specific activity.
5. It gave me a chance to be someone special.
6. I like to be active and do things.
7. In general I like this activity; by going I could help to see to it that it would be there for me to enjoy again.
8. In general I like this activity; by doing something there I could see to it that it would be there for me to enjoy again.
9. Others wanted me to go.
10. I was expected to go.
11. Everybody else was going, so I wanted to go, too.
12. I saw that everyone else was going, and it's not fun to be left out.
13. I was told to go.
14. This activity was required for students like me.
15. I knew this activity needed people.
16. I knew this activity needed to have certain things done.

The card-sort items for the hypothetical setting were identical to the above except that they were put in the future tense where appropriate, e.g., It will be a chance for me to do or see something new and different.

# Appendix 9.1

## Record of Activities

Name: Frazier, Celeste  
(last) (first)

School: Hearn High School

Sex (circle correct one): Boy Girl

Year in school (circle correct one): Freshman Sophomore Junior Senior

Class Schedule (If your schedule is the same every day, write in the subject on Monday and draw a line across):

| Periods     | Mon.                    | Tues.        | Wed.         | Thurs.       | Fri.         |
|-------------|-------------------------|--------------|--------------|--------------|--------------|
| <u>I</u>    | <u>Speech</u>           | <u>-----</u> | <u>-----</u> | <u>-----</u> | <u>-----</u> |
| <u>II</u>   | <u>American Govern.</u> | <u>-----</u> | <u>-----</u> | <u>-----</u> | <u>-----</u> |
| <u>III</u>  | <u>Study Hall</u>       | <u>-----</u> | <u>-----</u> | <u>-----</u> | <u>-----</u> |
| <u>IV</u>   | <u>English III</u>      | <u>-----</u> | <u>-----</u> | <u>-----</u> | <u>-----</u> |
| <u>V</u>    | <u>P.E.</u>             | <u>-----</u> | <u>-----</u> | <u>-----</u> | <u>-----</u> |
| <u>VI</u>   | <u>Biology</u>          | <u>-----</u> | <u>-----</u> | <u>-----</u> | <u>-----</u> |
| <u>VII</u>  | <u>Shorthand</u>        | <u>-----</u> | <u>-----</u> | <u>-----</u> | <u>-----</u> |
| <u>VIII</u> | <u>Music</u>            | <u>-----</u> | <u>-----</u> | <u>-----</u> | <u>-----</u> |
| <u>IX</u>   | <u>Study Hall</u>       | <u>-----</u> | <u>-----</u> | <u>-----</u> | <u>-----</u> |

Sample Page

On the following pages we have copied a record made by an Australian boy of a day's activities. You will notice that information is recorded on: (1) time of getting up, (2) activities during each hour, (3) where these were done, (4) who else was there, (5) the amount of time spent on each. Finally (6) the time of going to bed is shown at the bottom of the second page.

(1) I got up at 6:30

| Times               | (2) Activity        | (3) Where it was done | (4) Who else was there | (5) No. of Minutes |
|---------------------|---------------------|-----------------------|------------------------|--------------------|
| <u>Fore School</u>  |                     |                       |                        |                    |
| 00-6:00             |                     |                       |                        |                    |
| 00-7:00             | Washed              | Bathroom              | alone                  | 10                 |
|                     | Dressed             | Bedroom               | alone                  | 10                 |
|                     | Packed bag, etc.    | Bedroom               | alone                  | 10                 |
| 00-8:00             | Breakfast           | Kitchen               | Family                 | 20                 |
|                     | Fed animals         | Yard                  | Alone                  | 10                 |
|                     | Talked              | Kitchen               | Mother                 | 15                 |
|                     | Travelled to school | Bus                   | School friends         | 5                  |
| 00-9:00             | Travelled to school | Bus                   | School friends         | 30                 |
|                     | Played              | School playground     | School friends         | 30                 |
| <u>After School</u> |                     |                       |                        |                    |
| 00-1:00             | ate lunch           | School playground     | School friends         | 20                 |
|                     | Shopped             | Grocery Shop          | Alone                  | 20                 |
|                     | Talked              | School entrance       | School friends         | 20                 |



Out-of-Class Activities (cont'd)

| Times                | (2) Activity      | (3) Where it was done | (4) Who else was there | (5) No. of Minutes |
|----------------------|-------------------|-----------------------|------------------------|--------------------|
| After School         |                   |                       |                        |                    |
| 3:30-4:00            | Played Cricket    | School playground     | School friends         | 30                 |
| 4:00-5:00            | Travelled To home | Bus                   | School friends         | 45                 |
|                      | Washed            | Bathroom              | alone                  | 5                  |
|                      | Changed clothes   | Bedroom               | alone                  | 10                 |
| 5:00-6:00            | Homework          | Lounge                | alone                  | 45                 |
|                      | Watches TV        | Lounge                | Sister and Brother     | 15                 |
| 6:00-7:00            | Watched TV        | Lounge                | Sister and Brother     | 15                 |
|                      | Set the table     | Dining room           | Mother                 | 10                 |
|                      | Had dinner        | Dining room           | Family                 | 30                 |
|                      | Washed dishes     | Kitchen               | Sister                 | 5                  |
| 7:00-8:00            | Washed dishes     | Kitchen               | Sister                 | 10                 |
|                      | Watched TV        | Lounge                | Family                 | 30                 |
|                      | Talked            | Lounge                | Mother                 | 20                 |
| 8:00-9:00            | Visited friend    | Friend's house        | Friend                 | 60                 |
| 9:00-10:00           | Visited friend    | Friend's house        | Friend                 | 10                 |
|                      | Had bath          | Bathroom              | alone                  | 20                 |
|                      | Went to bed       | Bedroom               | alone                  | 10                 |
| 10:00-11:00          |                   |                       |                        |                    |
| (6) I went to bed at |                   |                       | 9:40                   |                    |

# Out-of-Class Activities

of Celeste Frazier on (date) March 19, 1962

Please remember when filling in your record that there are 60 minutes to be accounted for in every hour.

(1) I got up at 7:15

| Times         | (2) Activity                                        | (3) Where it was done                         | (4) Who else was there                          | (5) No. of Minutes   |
|---------------|-----------------------------------------------------|-----------------------------------------------|-------------------------------------------------|----------------------|
| Before School |                                                     |                                               |                                                 |                      |
| 6:00-6:00     |                                                     |                                               |                                                 |                      |
| 6:00-7:00     |                                                     |                                               |                                                 |                      |
| 7:00-8:00     | Washed<br>Pressed skirt<br>Dressed<br>Ate breakfast | Bathroom<br>Dining room<br>Bedroom<br>Kitchen | No one<br>Mother<br>Sister<br>Mother and sister | 10<br>10<br>10<br>15 |
| 8:00-8:30     | Traveled to school<br>Talked to friends             | Bus<br>Study Hall                             | School friends<br>Friends                       | 5<br>25              |
| Lunch Time    |                                                     |                                               |                                                 |                      |
| 12:00-12:35   | Went down town for lunch<br>Talked to friends       | Cafe<br>Lounge                                | Girl friends<br>Girl friends                    | 30<br>5              |

Out-of-Class Activities (cont'd)

| Times                | (2) Activity                   | (3) Where it was done | (4) Who else was there       | (5) No. of Minutes |
|----------------------|--------------------------------|-----------------------|------------------------------|--------------------|
| <u>After School</u>  |                                |                       |                              |                    |
| 3:00-4:00            |                                |                       |                              |                    |
| 4:00-5:00            | Went home from school          | Car                   | Friends                      | 10                 |
|                      | Changed clothes                | Bedroom               | No one                       | 10                 |
|                      | Washed hair                    | Bathroom              | No one                       | 20                 |
|                      | Went to neighbors              | Car                   | Friends                      | 20                 |
| 5:00-6:00            | Helped do chores               | Outside               | Father                       | 20                 |
|                      | Talked on phone                | Dining room           | Friend                       | 5                  |
|                      | Help get supper                | Kitchen               | Mother                       | 15                 |
|                      | Eat supper                     | Kitchen               | Family                       | 20                 |
| 6:00-7:00            | Layed down because of headache | Bedroom               | No one                       | 45                 |
|                      | Did dishes                     | Kitchen               | No one                       | 15                 |
| 7:00-8:00            | Finished dishes                | Kitchen               | No one                       | 10                 |
|                      | Visited with company           | Living room           | Mother and sister and friend | 50                 |
| 8:00-9:00            | Studied                        | Dining room           | Sister                       | 30                 |
|                      | Watched T.V.                   | Living room           | Mother and sister            | 30                 |
| 9:00-10:00           | Set sister's hair              | Living room           | Sister and mother            | 20                 |
|                      | Watched T.V.                   | Living room           | Sister and mother            | 40                 |
| 10:00-11:00          | Got ready for bed              | Bathroom              | No one                       | 10                 |
|                      | Went to bed                    | Bedroom               | Sister                       | 5                  |
| 11:00-12:00          |                                |                       |                              |                    |
| (6) I went to bed at |                                |                       |                              | 10:15              |

## Appendix 10.1

| Variety<br>Number | Variety Name                              | Number in<br>Midwest<br>County | Number in<br>University<br>City | Number in<br>University<br>City<br>Sample |
|-------------------|-------------------------------------------|--------------------------------|---------------------------------|-------------------------------------------|
| 3                 | Attorneys and Real Estate Offices         | 9                              | 91                              | 14                                        |
| 5                 | Auctions, Livestock                       | 1                              | 1                               | 1                                         |
| 6                 | Banks                                     | 4                              | 20                              | 2                                         |
| 7                 | Barbers and Beauticians                   | 10                             | 25                              | 5                                         |
| 9                 | Builders, and Builders' Suppliers         | 31                             | 77                              | 16                                        |
| 10                | Bus Stops (Station)                       | 1                              | 2                               | 1                                         |
| 11                | Cemeteries                                | 5                              | 2                               | 2                                         |
| 13                | Courts                                    | 4                              | 6                               | 2                                         |
| 15                | Dances and Schools of Dancing             | 1                              | 2                               | 1                                         |
| 18                | Doctors' Offices and Clinics              | 8                              | 78                              | 12                                        |
| 19                | Drug and Department Stores                | 15                             | 50                              | 10                                        |
| 27                | Factories                                 | 2                              | 10                              | 1                                         |
| 31                | Fire Stations                             | 2                              | 2                               | 1                                         |
| 34                | Food and Feed Distributors                | 25                             | 67                              | 14                                        |
| 37                | Funeral Homes                             | 3                              | 5                               | 2                                         |
| 39                | Government, School, and Business Offices  | 25                             | 76                              | 13                                        |
| 40                | Greenhouses                               | 1                              | 5                               | 1                                         |
| 42                | Hardware and Home Furnishers              | 8                              | 56                              | 8                                         |
| 43                | Hatcheries                                | 1                              | 2                               | 1                                         |
| 45                | Hospitals                                 | 1                              | 3                               | 2                                         |
| 46                | Hotels, Rooming Houses, and Nursing Homes | 9                              | 18                              | 5                                         |
| 51                | Laundries and Cleaners                    | 3                              | 20                              | 4                                         |
| 52                | Libraries                                 | 2                              | 1                               | 1                                         |
| 59                | Motor Vehicle Sales and Service           | 39                             | 108                             | 20                                        |
| 60                | Movies                                    | 1                              | 4                               | 1                                         |



|    |                                |    |    |    |
|----|--------------------------------|----|----|----|
| 63 | Newspapers and Printers        | 3  | 5  | 2  |
| 69 | Photographers                  | 1  | 7  | 1  |
| 71 | Police Stations and Jails      | 1  | 3  | 1  |
| 72 | Post Offices                   | 4  | 2  | 2  |
| 74 | Railroad Freight Stations      | 1  | 2  | 1  |
| 80 | Restaurants and Taverns        | 15 | 65 | 11 |
| 87 | Shoe Shops, Repair and Sale    | 3  | 9  | 2  |
| 89 | Storage Buildings              | 2  | 2  | 1  |
| 90 | Telephone and Electric Offices | 5  | 2  | 2  |
| 93 | Truck Lines, Heavy             | 11 | 21 | 5  |
| 94 | Veterinarians                  | 1  | 7  | 1  |
| 96 | Watch Repair and Jewelry Shops | 3  | 11 | 2  |
| 98 | Water Plants                   | 1  | 1  | 1  |

Unique to University City

|     |                                 |  |    |   |
|-----|---------------------------------|--|----|---|
| 8   | Book Exchanges (Bookstores)     |  | 3  | 1 |
| 75  | Railway Maintenance Departments |  | 2  | 1 |
| 77  | Refuse Clean-up, City Routes    |  | 1  | 1 |
| 101 | Coal Yards                      |  | 1  | 1 |
| 109 | Sewage Disposal Plants          |  | 1  | 1 |
| 110 | Taxis                           |  | 2  | 1 |
| 113 | Trailer Parks                   |  | 6  | 1 |
| 136 | Florist and Gift Shops          |  | 11 | 2 |
| 150 | Advertising Agencies            |  | 1  | 1 |
| 151 | Architects and Engineers        |  | 9  | 2 |
| 152 | Bicycles, Sales and Service     |  | 1  | 1 |
| 153 | Bowling Alleys                  |  | 2  | 1 |
| 154 | Dairy Products Distributors     |  | 6  | 1 |

|     |                                                  |   |   |
|-----|--------------------------------------------------|---|---|
| 155 | Music and Musical Instruments, Sales and Service | 9 | 2 |
| 156 | Office Supplies and Repair                       | 7 | 1 |
| 157 | Railroad Passenger Stations                      | 2 | 1 |
| 158 | Railway Express Offices                          | 1 | 1 |
| 159 | Telegraph Offices                                | 1 | 1 |
| 160 | Trailer Rentals                                  | 2 | 1 |
| 161 | Tree Surgeons                                    | 2 | 1 |

Unique to Midwest County

|    |                        |   |
|----|------------------------|---|
| 14 | Dairy Barns            | 1 |
| 47 | Ice Companies          | 1 |
| 50 | Kennels                | 1 |
| 53 | Meat Packing Companies | 1 |
| 88 | Slaughter Houses       | 1 |

Totals

Midwest County 267

University City 938

University City Sample 195

# Appendix 11.1

Table 1 Behavior setting varieties showing number of settings in each for four Midwest County communities--1958-59

| Var.<br>no.                                  | <u>Malden</u> | <u>Midwest</u> | <u>Vernon</u> | <u>Walker</u> | <u>Total</u> |
|----------------------------------------------|---------------|----------------|---------------|---------------|--------------|
| 1. Athletic Contests, Indoors                | 12            | 14             | 14            | 16            | 56           |
| 2. Athletic Contests, Outdoors               | 17            | 16             | 18            | 19            | 70           |
| 3. Attorneys and Real Estate                 | 0             | 6              | 2             | 1             | 9            |
| 4. Auction and Jumble Sales                  | 1             | 2              | 2             | 6             | 11           |
| 5. Auctions, Livestock                       | 0             | 0              | 1             | 0             | 1            |
| 6. Banks                                     | 1             | 1              | 2             | 0             | 4            |
| 7. Barbers and Beauticians                   | 2             | 2              | 4             | 2             | 10           |
| 8. Book Exchange and Rentals                 | 1             | 1              | 1             | 0             | 3            |
| 9. Builders, Repairers, and Suppliers        | 6             | 13             | 8             | 4             | 31           |
| 10. Bus Stops                                | 0             | 1              | 0             | 0             | 1            |
| 11. Cemeteries                               | 1             | 1              | 2             | 1             | 5            |
| 12. Classrooms, Freetime and Home Rooms      | 8             | 9              | 16            | 8             | 41           |
| 13. Courts                                   | 0             | 6              | 0             | 0             | 6            |
| 14. Dairy Barns                              | 0             | 1              | 0             | 0             | 1            |
| 15. Dances                                   | 5             | 8              | 7             | 2             | 22           |
| 16. Dead Stock Removers                      | 0             | 0              | 1             | 0             | 1            |
| 17. Dinners and Banquets                     | 13            | 37             | 29            | 17            | 96           |
| 18. Doctors' Offices and Clinics             | 2             | 3              | 4             | 5             | 14           |
| 19. Drug and Department Stores               | 2             | 7              | 9             | 1             | 19           |
| 20. Educational Groups, Academic             | 16            | 48             | 36            | 17            | 117          |
| 21. Educational Groups, Driver Education     | 1             | 1              | 1             | 0             | 3            |
| 22. Educational Groups, Home Economics       | 1             | 6              | 4             | 3             | 14           |
| 23. Educational Groups, Music Classes        | 17            | 15             | 9             | 12            | 53           |
| 24. Educational Groups, Physical Education   | 1             | 10             | 2             | 2             | 15           |
| 25. Educational Groups, Shop and Agriculture | 1             | 2              | 4             | 4             | 11           |
| 26. Elections                                | 1             | 3              | 3             | 2             | 9            |

|                                                | <u>Malden</u> | <u>Midwest</u> | <u>Vernon</u>  | <u>Walker</u>  | <u>Total</u> |
|------------------------------------------------|---------------|----------------|----------------|----------------|--------------|
| 27. Factories                                  | 0             | 1              | 1              | 0              | 2            |
| 28. Fairs, Circuses, and Carnivals             | 4             | 5              | 9              | 3              | 21           |
| 29. Fire and Tornado Drills                    | 2             | 2              | 4              | 2              | 10           |
| 30. Fires                                      | 0             | 1              | 3              | 0              | 4            |
| 31. Fire Stations                              | 1             | 1              | 0 <sup>a</sup> | 0 <sup>a</sup> | 2            |
| 32. Fireworks Sales                            | 0             | 1              | 0              | 0              | 1            |
| 33. Fish Distributing Program, Dept. of Agric. | 0             | 1              | 0              | 0              | 1            |
| 34. Food and Feed Distributors                 | 5             | 12             | 7              | 3              | 27           |
| 35. Food Sales (for money raising)             | 3             | 8              | 6              | 5              | 22           |
| 36. Fund and Membership Drives                 | 6             | 14             | 7              | 7              | 34           |
| 37. Funeral Homes                              | 1             | 1              | 1              | 0              | 3            |
| 38. Funeral Services                           | 3             | 3              | 6              | 3              | 15           |
| 39. Government, School, and Business Offices   | 3             | 21             | 2              | 2              | 28           |
| 40. Greenhouses                                | 0             | 0              | 1              | 0              | 1            |
| 41. Hallways and Coatrooms                     | 2             | 4              | 3              | 2              | 11           |
| 42. Hardware and Home Furnishers               | 1             | 3              | 3              | 1              | 8            |
| 43. Hatcheries                                 | 0             | 0              | 1              | 0              | 1            |
| 44. Home Handicrafts                           | 0             | 0              | 0              | 1              | 1            |
| 45. Hospitals                                  | 0             | 0              | 0              | 7              | 7            |
| 46. Hotels, Rooming Houses, and Nursing Homes  | 1             | 4              | 3              | 2              | 10           |
| 47. Ice Companies                              | 1             | 0              | 0              | 0              | 1            |
| 48. Initiations                                | 1             | 2              | 2              | 1              | 6            |
| 49. Insurance Agents                           | 3             | 4              | 1              | 1              | 9            |
| 50. Kennels                                    | 0             | 1              | 0              | 0              | 1            |
| 51. Laundries and Cleaners                     | 3             | 9              | 3              | 1              | 16           |
| 52. Libraries                                  | 1             | 3              | 2              | 1              | 7            |



Malden Midwest Vernon Walker Total

|                                     |    |    |     |    |     |
|-------------------------------------|----|----|-----|----|-----|
| 53. Meat Packing Companies          | 0  | 0  | 1   | 0  | 1   |
| 54. Meetings, Executive             | 18 | 51 | 27  | 16 | 112 |
| 55. Meetings, Organization Business | 11 | 33 | 24  | 19 | 87  |
| 56. Meetings, Social Cultural       | 21 | 30 | 34  | 11 | 96  |
| 57. Meetings, Social Recreational   | 3  | 9  | 7   | 4  | 23  |
| 58. Meter Readers                   | 2  | 3  | 2   | 1  | 8   |
| 59. Motor Vehicle Sales and Service | 8  | 11 | 16  | 4  | 39  |
| 60. Movies                          | 1  | 1  | 5   | 5  | 12  |
| 61. Music Classes, Individual       | 1  | 6  | 5   | 1  | 13  |
| 62. National Guard                  | 0  | 0  | 1   | 0  | 1   |
| 63. Newspapers and Printers         | 0  | 1  | 1   | 1  | 3   |
| 64. Open Spaces                     | 3  | 8  | 4   | 4  | 19  |
| 65. Outings                         | 7  | 30 | 14  | 10 | 61  |
| 66. Paper Routes                    | 4  | 3  | 3   | 4  | 14  |
| 67. Parent-Teacher Conferences      | 0  | 2  | 0   | 0  | 2   |
| 68. Parties                         | 22 | 22 | 26  | 19 | 89  |
| 69. Photographers                   | 0  | 0  | 0   | 1  | 1   |
| 70. Plays, Concerts, and Programs   | 12 | 29 | 24  | 22 | 87  |
| 71. Police Stations and Jails       | 0  | 1  | 0   | 0  | 1   |
| 72. Post Offices                    | 1  | 1  | 1   | 1  | 4   |
| 74. Railroad Freight Stations       | 0  | 0  | 1   | 0  | 1   |
| 76. Recognition Programs            | 8  | 10 | 7   | 4  | 29  |
| 77. Refuse Clean-up, City           | 2  | 2  | 1   | 1  | 6   |
| 78. Religious Services and Classes  | 47 | 66 | 123 | 56 | 292 |

|                                              | <u>Malden</u>  | <u>Midwest</u> | <u>Vernon</u>  | <u>Walker</u>  | <u>Total</u> |
|----------------------------------------------|----------------|----------------|----------------|----------------|--------------|
| 79. Reporters                                | 1              | 0 <sup>a</sup> | 0 <sup>a</sup> | 0 <sup>a</sup> | 1            |
| 80. Restaurants and Taverns                  | 3              | 12             | 10             | 2              | 27           |
| 81. Restrooms                                | 6              | 18             | 24             | 11             | 59           |
| 82. Retreats                                 | 0              | 1              | 0              | 0              | 1            |
| 83. School, Coaches' Rooms                   | 1              | 1              | 1              | 1              | 4            |
| 84. School, Janitors' Rooms                  | 1              | 1              | 2              | 2              | 6            |
| 85. School, Special Days                     | 2              | 3              | 2              | 2              | 9            |
| 86. School, U.S. Savings Stamps Sale         | 0              | 2              | 0              | 0              | 2            |
| 87. Shoe Shops, Repair Sale                  | 1              | 1              | 1              | 0              | 3            |
| 88. Slaughter Houses                         | 0              | 0              | 1              | 0              | 1            |
| 89. Storage Buildings                        | 0              | 1              | 1              | 0              | 2            |
| 90. Telephone and Electric Offices           | 1              | 2              | 1              | 1              | 5            |
| 91. Telephone Booths                         | 0 <sup>a</sup> | 1              | 0 <sup>a</sup> | 0 <sup>a</sup> | 1            |
| 92. Trafficways                              | 1              | 1              | 1              | 1              | 4            |
| 93. Truck Lines, Heavy                       | 3              | 2              | 4              | 2              | 11           |
| 94. Veterinarians                            | 0              | 1              | 1              | 0              | 2            |
| 95. Volunteer Work and Fund Raising Projects | 2              | 13             | 4              | 6              | 25           |
| 96. Watch Repair and Jewelry Shops           | 1              | 1              | 1              | 0              | 3            |
| 98. Water Plants                             | 0              | 1              | 0              | 0              | 1            |
| 99. Weddings                                 | 1              | 3              | 5              | 0              | 9            |
|                                              | <hr/>          | <hr/>          | <hr/>          | <hr/>          | <hr/>        |
| Total No. of Settings                        | 345            | 698            | 630            | 376            | 2049         |
| Total No. of Varieties                       | 67             | 83             | 78             | 62             | 96           |

<sup>a</sup>occurred as part of another setting

Appendix 12.1  
The School Classes in which Small and Large School  
Students were Enrolled

These data refer to 28 pairs of intellectually superior Juniors in the small and large schools identified in Chapter 6. The subjects comprise all the small school Juniors with IQ above 110, and an equal number of large school Juniors matching them, subject by subject, with respect to IQ and sex.

Data on school class enrollments are presented in the following tabulation.

|                                     | <u>Small Schools</u> |                | <u>Large School</u> |                |
|-------------------------------------|----------------------|----------------|---------------------|----------------|
|                                     | <u>Number</u>        | <u>Average</u> | <u>Number</u>       | <u>Average</u> |
| Number of Juniors                   | 28                   |                | 28                  |                |
| Total class enrollments             | 165                  | 5.9            | 143                 | 5.1            |
| Academic class enrollments          | 97                   | 3.5            | 113                 | 4.0            |
| Total nonacademic class enrollments | 68                   | 2.4            | 30                  | 1.1            |
| Music classes                       | 26                   |                | 5                   |                |
| Art classes                         | 0                    |                | 2                   |                |
| Commercial classes                  | 25                   |                | 3                   |                |
| Home economics classes              | 3                    |                | 5                   |                |
| Shop classes                        | 1                    |                | 6                   |                |
| Physical education classes          | 13                   |                | 7                   |                |
| Driver education classes            | 0                    |                | 2                   |                |

The superior Junior students of the large school were enrolled in a somewhat smaller total number of school classes, but a somewhat greater number of academic classes than the equally superior Juniors of the small schools. There were eight "academic specialists" among the large school Juniors who were enrolled in five academic courses each; there were three similar specialists among the small school Juniors. The greatest difference related to school size was the large number of nonacademic classes taken by the small school Juniors, amounting to 38 additional courses. Nonacademic classes made up 41 per cent of the classes

taken by the small school students and 21 per cent of the classes taken by the large school students. In short, the education which the small school Juniors were receiving, as measured by "classes," was relatively heavier in total, and less academically specialized than the education of the large school Juniors. We have no data on the quality of the classes, or the depth of student participation in them.

These data are in accord with those concerning nonclass behavior settings: although more school classes and more varieties of classes were available for them, the large school students participated in fewer classes and in fewer varieties of classes than the small school students.



Appendix 12.2  
Music Specialization in Small and Large Schools

The subjects were all the Junior students of the large school (304 boys and 300 girls) and of the four small schools (45 boys and 46 girls). The data are tabulated below:

|                                                                                                    | <u>Boys</u>       |                   | <u>Girls</u>      |                   |
|----------------------------------------------------------------------------------------------------|-------------------|-------------------|-------------------|-------------------|
|                                                                                                    | <u>Small Sch.</u> | <u>Large Sch.</u> | <u>Small Sch.</u> | <u>Large Sch.</u> |
| Number of Juniors                                                                                  | 45                | 304               | 46                | 300               |
| Number (and %) enrolled in one or more music classes                                               | 10 (22.2)         | 29 (9.5)          | 35 (76)           | 48 (16)           |
| Number (and %) enrolled in two music classes                                                       | 3 (6.7)           | 5 (1.6)           | 15 (33)           | 3 (1.0)           |
| Number (and %) of music student (line 2) who were also performers in nonclass music settings       | 10 (100)          | 29 (100)          | 35 (100)          | 48 (100)          |
| Mean number of musical performances per students in three-month period                             | 2.3               | 3.6               | 2.7               | 1.1               |
| Number (and %) of music students (line 2) who were performers in church music settings             | 3 (33.3)          | 7 (24.1)          | 20 (57.1)         | 24 (50)           |
| Number (and %) of music students (line 2) who were musical performers in nonschool social settings | 0 (0)             | 4 (13.8)          | 0                 | 3 (6.2)           |
| Number (and %) of music students (line 2) who were employed as professional musicians              | 0                 | 6 (21)            | 0                 | 0                 |

From these data it is clear that many more of the small school than the large school Juniors were receiving some formal classroom instruction in music; for boys and girls combined, the proportions were 49 per cent (small schools) and 13 per cent (large school). The proportions enrolled in two music classes were still more different, namely 20 per cent and 1.3 per cent for the small and large schools, respectively. All students who were enrolled in music classes participated in nonclass musical performances within school behavior settings,

and the average number of performances per student did not differ greatly for the small and large school students. Furthermore the over-all proportions of the music students who participated in out-of-school music settings did not differ greatly, though some large school boys, and no small school boys, engaged in professional musical activities and participated in nonschool social settings. The evidence adds up to the fact that musical education and participation within the schools and communities was much more widely distributed among the small school than among the large school Juniors.

However, when the individual students are considered, we find that 10 of the 77 music students in the large school and two of the 45 music students in the small school were music "specialists." Here are the music participation records of these specialists.

| <u>Student</u> | <u>Music Classes</u> | <u>Large School</u>              |                                               | <u>Professional Music Employment</u> |
|----------------|----------------------|----------------------------------|-----------------------------------------------|--------------------------------------|
|                |                      | <u>School Music Performances</u> | <u>Nonschool Music Performances</u>           |                                      |
| 1 (Boy)        | Band and orchestra   | 10                               | Instructs drum corp                           | Dance band;<br>Gives drum lessons    |
| 2 (Boy)        | Band and orchestra   | 10                               | Church brass choir                            | ----                                 |
| 3 (Boy)        | Band and orchestra   | 7                                | -----                                         | Dance band                           |
| 4 (Boy)        | Band and orchestra   | 6                                | Youth symphony                                | ----                                 |
| 5 (Boy)        | Band and orchestra   | 9                                | Church choir                                  | ----                                 |
| 6 (Boy)        | Band                 | 6                                | -----                                         | Combo band                           |
| 7 (Boy)        | Band                 | 5                                | -----                                         | Dance band                           |
| 8 (Boy)        | Band                 | 5                                | -----                                         | Dance band                           |
| 9 (Girl)       | Orchestra and choir  | 6                                | Church organ, youth symphony                  | Dance studio                         |
| 10 (Girl)      | Orchestra and glee   | 4                                | Church choir, and song-leader, youth symphony | ----                                 |

Small School

|          |                                     |   |                                                |      |
|----------|-------------------------------------|---|------------------------------------------------|------|
| 1 (Girl) | Band, mixed chorus,<br>girls chorus | 4 | Church choir, special<br>choir, piano for S.S. | ---- |
| 2 (Girl) | Band, mixed chorus,<br>girls chorus | 3 | -----                                          | ---- |

Nine of the large school "music specialists" far exceeded in degree of specialization any small school music specialist. In fact the large school music specialists dominated the school music activities; 44 per cent of the school music performances of the large school Juniors who were enrolled in music classes were performed by these ten students. The two music specialists of the small schools contributed only six per cent of the small school, nonclass music performances. Not only was musical participation less widespread among the Junior students of the large school, there was greater concentration of that which did occur within a relatively few specialists.